THE Portable Paper

Special Feature: *Getting Organized*

dBXL: *dBase III clone works on Plus*

New HP DeskJet: *LaserJet Quality For Under $1000*

Direc-Link: *Best Portable Vectra file transfer program*

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And ROM Backup	**179**	**169**	**152**	**135**	**118**	**110**	**101**	**93**
Duette	100	90	86	81	77	75	73	71
And ROM Backup	**195**	**185**	**175**	**164**	**154**	**149**	**144**	**139**
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And ROM Backup	**195**	**175**	**157**	**140**	**122**	**114**	**105**	**96**
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Norton Advanced	150	129	122	114	107	103	99	96
PrinterTalk/Format110	90	60	63	56	49	45	42	38
RightWriter	95	89	86	82	79	77	75	73
And ROM Backup	**274**	**268**	**252**	**235**	**219**	**211**	**202**	**194**
SHELP	55	50	45	40	35	32	30	27
SideWinder + Utils	80	70	65	61	56	54	52	49
Shelp+SideWinder Disks								
And ROM backup	**230**	**215**	**200**	**185**	**171**	**163**	**156**	**148**
T/Master	295	279	261	243	225	216	207	198
Typing Whiz	50	40	36	32	28	26	24	22
And ROM Backup	**145**	**135**	**121**	**108**	**94**	**88**	**81**	**74**
Webster Speller	80	70	66	62	58	56	54	52
And ROM Backup	**259**	**249**	**233**	**217**	**201**	**193**	**185**	**177**
Webster, RightWriter								
And ROM backups	**533**	**517**	**436**	**407**	**378**	**363**	**349**	**334**
WordPerfect,Plus/HP150	495	299	289	279	269	C A L L		
Shelp+Format110+Editor								
SideWinder+PrinterTalk								
And SuperROM backup	**474**	**409**	**368**	**327**	**286**	**266**	**245**	**225**
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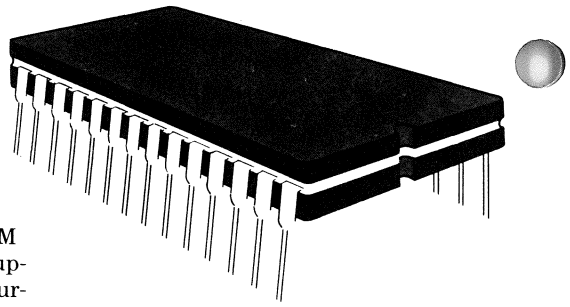
HOW TO ORDER: Use the chart above to determine the discount price. If you do not find the product you want listed on the chart, contact us for discount pricing. Enter the desired quantity on the order form in the back of this issue, or use company purchase order. Prices subject to change without notice.

Great news for Portable Plus users:

Our best-selling Portable software now on ROM chips



Pack your favorite programs into just a few slots in your ROM drawer!
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ROM BACKUP: HOW IT WORKS

Before we could offer software on ROM to our customers, we thoroughly researched the field, locating the most reliable sources of Roms and ROM services. In addition, we have formed special ROM agreements with our leading software suppliers, including Borland International (Turbo Pascal), Simon & Schuster (Webster's Spelling Checker), and Southern Software (SideWinder).

For numerous legal, economic, and logistical reasons, we offer ROMs to you as a Backup Service. This means you may purchase a product on ROM provided you already own the product on disk. (If you purchased a disk product from us—Personalized Software—we have that in our records. If you purchased a product elsewhere, you must show us proof of purchase before we can sell you the ROM Backup.)

Also, it is important that you read and adhere to the licensing agreement that comes with the disk-based version of the software you buy, because the same agreement applies to the corresponding ROM Backup. In most cases, this means you may use the software on only one computer system. Remember, you are buying a *backup* copy of your software, not a second copy.

Having to buy both the disk version and its ROM Backup is not without advantages. For one thing, many disk products include extra utilities that have to be deleted from the ROM chips in order to save space. Also, if your ROM drawer gets full, you can remove a ROM chip and still run the corresponding program off your disk drive.

EASY TO INSTALL

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LIFETIME MONEY-BACK GUARANTEE

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Whatever your reason: to free up valuable memory space. . .to minimize the need for an external disk drive. . .or for sheer convenience, order one or more of our best-selling programs on ROM Backup today.

To order, enter products and prices in special ROM Backup section at bottom of order form in back of this issue.■

SOFTWARE AVAILABLE ON ROM

Here are the programs we're offering on ROM Backup. (For product details, see individual ads elsewhere in this issue.) Note that in many cases you can save space in your ROM drawer by buying two or more programs on the same chip. All our ROMs come with complete, easy-to-follow installation instructions.

IMPORTANT: **You must own (or order) the disk versions of any products you buy on ROM Backup. To order, use order form inside back cover.**

	Product	*Notes*	*Size of ROM*	*Prices*
	Shelp	Includes improved version of note extraction program.	32K	$55.
	SideWinder	Does not include any of the utility programs that come with the disk-based version of SideWinder.	32K	$55.
	The Editor		64K	$95.
★	HPDuette	Contains HP half of software.	64K	$95.
★	HPCalculator	No disk purchase necessary.	64K	$95.
	HPrint		64K	$95.
	Shelp + SideWinder	Same versions as on 32K ROM chips (see above), plus SideWinder enhancement utility.	64K	$95.
	Sketch		64K	$95.
	Turbo Pascal	Includes RUN.COM, which can save 10K of disk space from any program you compile with Turbo.	64K	$95.
	Typing Whiz		64K	$95.
	Best of DOS Tools	Contains selected utilities from Portable Utilities Disk, Vol. 1: DOS Tools*	128K (Two 64K ROMs)	$129.
	Super ROM The Editor Shelp SideWinder Mini PrinterTalk Format110	Mini PrinterTalk is the abbreviated version included on the PrinterTalk disk; it is functionally equivalent to PrinterTalk for most applications. Shelp and SideWinder are the same versions as on the 32K ROM chips—see above.	128K	$149.
	Webster's Spelling Checker	Also includes two useful utilites—DiskPacks and New Mode—at no extra charge.	256K (Two 128K ROMs)	$179.

*Utilities included in the ***Best of DOS Tools*** ROM Backup are as follows. For program details, see Portable Utilities ad in this issue.

PACK	VDL	MOVE	WHEREIS	PRNCONF	TRIM	DIRS
CLEAN	TY	TJETA	CHANGE	SDL	FGREP	SQPC
COPYNEW	ARCE	RENDIR	ASK	MOVEALL	LABEL	FDUMP
DUMP	TMA	OFF	TEE	WAIT	BEEP	SM
DIRALL	CYPHER	FCOPY	ARC520	FDATE	XCOPY	

Note: ARC520 is shareware; the author normally requests a $35 contribution. However, you do not need to send any money. We've already paid your user fee.

★ =NEW

ABOUT ROMS

A ROM ("Read-Only Memory") is a microelectronic chip that stores programs or other data. Once information is "burned in" to a ROM, it cannot be altered.

A different form of ROM, called an EPROM, *can* be altered once information is burned in. (EPROM stands for Erasable Programmable Read-Only Memory.)

Although blank ROMs are in general less expensive than blank EPROMs, the initial burn-in costs for ROMs are much higher. ROMs also require a much longer lead time to produce than EPROMs. Currently, EPROMs that can be run on the HP Portables come in 16K, 32K, and 64K sizes. ROMs are 128K.

We use EPROMs for our 32K and 64K backup chips, and ROMs for our 128K packages.

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PUBLISHER'S MESSAGE

Hal Goldstein

Hewlett Packard has moved its Portable division 1000 miles down the coast from Corvallis, Oregon to Sunnyvale, California. Personalized Software has moved its entire operation five miles down the highway from our home in the Iowa countryside to a building on the Fairfield, Iowa town square.

Both moves have significance for HP Portable users. For the short term, the HP move means a lack of product support and R & D effort on the HP Portable front. Very few Corvallis engineers have elected to follow the Portables down the coast. Despite all its charm, life in the San Francisco bay area also means a high cost of living and more complexity in every day life. Consequently, new faces will make up the HP Portable marketing, R & D, and manufacturing team.

In the long run it should mean more competitive pricing for HP Portables and a more coherent and integrated HP microcomputer line. HP is putting a top quality, experienced team in place to manage the HP Portable computer division. Based on my early conversations, they seem open to ideas and enthusiastic about their mission. The Portable Plus is still alive and well, although the Portable Vectra is viewed as the line of the future. (Let's hope we end up seeing the best of the Portable Plus and Portable Vectra in upcoming machines.)

We can only wait and see what happens.

Here at Personalized Software, we have doubled the number of phone lines from two to four (no more busy signals, we hope). The expanded work space in our new building means we should be more efficient in serving your needs. We will be incorporating in March with (possibly) a new name—so far, Personalized Portables Corporation and Portable Resources, Inc. lead the pack. . . any other suggestions?

Your support has enabled us to grow. That support has let us continue to bring out new HP Portable products and expand *The Portable Paper*. We appreciate your praise and your constructive criticism.

You send us so much interesting material to share with other readers. In this issue we have expanded our letters section so that we could publish some of that information. We also discuss the implications of HP's exciting new DeskJet printer for HP Portable users. This fourteen pound inkjet printer retails for under one thousand dollars yet produces LaserJet letter quality text and graphics on normal letterhead or copy machine paper.

As this issue of *The Portable Paper* was put together, "Getting Organized" emerged as the unifying theme and is also the title of the featured article.

Hal Goldstein

Letters

Notes On The First Two Years Of The Portable Paper

After plowing through two years' worth of *The Portable Paper* in two weeks I can't help but feel like a member of a very large extended family with you as the "clan coordinator." I am convinced that your efforts on behalf of HP Portable users are primarily selfless and based upon a true desire to help (and be helped by) the rest of our community. Further, I not only do not begrudge you the profit that you make on Personalized Software sales but wish you could gain in quantity what you probably are not getting from the size of (individual) sales.

As an independent computer consultant on the HP3000, with a need for travel built into my genes (sometimes I have trouble lasting even a year in the same town), I have spent the last eight years working contracts in England, Scotland, Ireland, Holland, Switzerland, Italy, New York, and, yes, silicon valley. About five years ago I suggested to friends that we pool our resources and buy a computer to share—only to be told that there were no reasons for spending that kind of money. Frustrated, I continued to type letters to my many friends around the world, using **hpslate** on the 3000, and photocopying the printouts for distribution. Finally I woke up to the fact that those friends (who originally couldn't think of a reason for buying a computer) were suddenly all busy crunching away on their own machines, scattered about Europe—leaving me feeling foolish.

Determined to correct this situation I started collecting data-sheets on lap models and reading magazine reviews. A few years ago the word in England was the HP110. The only drawbacks were the price and the mini-screen. By the time I returned to California in 1986 I knew that the only computer that would satisfy my requirements—small, lightweight, sturdy, full-size screen—was the Portable Plus. People would advise me with variations on the theme: "Look at this new portable XYZ." Invariably, XYZ would be larger, bulkier and less satisfying than the Plus. Finally, I sprang for the Plus, with full memory drawers, MS Word, dBASE II, Lattice C, Thinkjet & 9114B. Sure it cost a bundle—but it does what I want.

My primary use for the Plus is portable word processing. I write a lot of letters to a lot of people (and a few articles to magazines) and now am able to tailor my letters to specific friends, without retyping all of the many details that they require about my current whereabouts (like "What country are you in this week?"). In addition, I use dBASE II to manage my finances, my "Letters" database containing information on who has received which letters when, my several pages of resume details plus recruiter addresses around the world, a language self-tutor program and more.

While reading back issues of *The Portable Paper* I made notes of comments I'd like to add. Readers should refer to their copies. If they don't have all the back issues, let me urge them to get them and read them, and then read them again.

1. CHKDSK B:/V (Vol. 1, No. 5, p. 26, Vol. 2, No. 1, p. 30):

On the Plus this produces the message "CHKDSK of B: not allowed." No big deal, just that someone said something works, and it doesn't seem to.

2. Thinkjet paper:

I have found in my travels that there is plenty of "poor quality" paper available around the world, except here in the U.S. My guess is that everyone outside of the U.S. can acquire low-quality, high-absorption paper at wonderfully low prices—but that, for once, our American predilection for quality has hurt us.

3. dBASE II (Vol. 2, No. 2, p. 22):

I called up Ashton-Tate in mid-1986 to learn about the differences between II & III and discovered that the most relevant difference (for me) was $150 vs. $680. Let me be more explicit: dBASE II can be bought from Ashton-Tate for $150! At that price it's too good a bargain to pass by. I am thoroughly satisfied with the product and have no desire to upgrade—even should a version of dBASE III exist on the Plus (I was told by Ashton-Tate that there was no version for the Portables). You might also note that, because of the existence of III, there are many dBASE II books on sale in bookstores and garages at incredible bargains: I've picked up four different books in the past few months for less than $20 total. This is especially useful because the dBASE II manual is by far the worst computer manual I have ever seen in 15 years of programming FORTRAN, COBOL & assorted 4GL's on IBM, Burroughs, Honeywell, NCR and HP. Without the aid of these "supplementary" books you're likely to waste a lot of calls to HP or Ashton-Tate only to be told that you should have looked at page 23b paragraph 2 where the information you want is "clearly implied."

Comments on Ed Keefe's comments (Vol. 2, No. 2, p. 22):

a) dBASE II is cost effective at $150;

b) I found it easy to learn (even with the horrendous manual);

c) the built-in editor is not recommended, even by Ashton-Tate—instead use the word-processor of your choice and save the file to **<filename>.prg** in ASCII format.

Hints for people who already own dBASE II:

a) escape sequences can be embedded into your code, for screen display control, through the use of the ASCII character codes (refer to Thinkjet manual p. J-2 for printer controls).

b) some applications I've written in dBASE II that I now consider necessities:

i. Checking-account/credit-card maintenance system. My check book is always balanced, and my credit-card status is always up to date. (No surprise credit denials.)

ii. All of my letters are stored on disk and indexed by date, number and to whom sent. No longer do I type the same story over and over—just cut and paste—and no longer do I wonder what it is I did or did not tell someone (this file also includes all formal correspondence);

iii. a self-tutoring foreign vocabulary instructor. I just type in the new words as I come across them (from a text book or from out on the street).

iv. a Star Trek game based upon the ubiquitous Star Trek game found on many mainframes.

4. MS WORD:

Special characters for controlling the Thinkjet font size can be embedded by copying the appropriate lines from the file created as described in Vol. 1, No. 1, p. 5. I use this method for printing my running-headers in compressed mode. (Don't forget to return the print to normal mode at the end of the altered text, before continuing with the "normal" part of your document).

5. KODAK DATASHOW (Vol. 2, No. 3, p. 30):

I've seen this unit in action and was impressed—as I worked on my terminal everything I entered and received from the computer was echoed onto the opaque projector for all to see. If a company has the need to demonstrate user-computer interaction, and the monetary resources, this "toy" gets my recommendation.

6. PACK (Vol. 2, No. 6, p. 42):

Pack (792 04-03-86) does work on the C: drive on the Portable Plus.

7. Note to Molly Glen (Vol. 2, No. 6, p. 17):

I sympathize with your hardware problems, even though I've lucked out and have only experienced software difficulties. It used to be lonely being a Portable owner ("What's a Portable?" "I didn't know HP made a laptop," "Why didn't you get an XYZ?")—but not anymore. Aside from this emotional reinforcement, though, I wanted to comment on one of your difficulties. . . my Thinkjet has been stacked on top of my 9114B almost since I bought them. I'm only beginning to appreciate how fortunate I've been with my hardware—my 9114B has never given me any power difficulties whatsoever (I keep all units plugged in at all times); nor have I had any need for maintenance on the Thinkjet or the Portable Plus. So I ask, please, before I "paint myself into a corner," why can I do for a year what Molly can't for a moment? Is putting the printer atop the disk drive really so bad, or is it just Molly's machine? (I can feel no heat-up on either of my units.)

8. Portable Plus and X-rays:

For all the many times my computer has gone through airport check-in's I've not encountered any difficulty whatsoever. But better safe than sorry!

Finally, let me again reassure you that *The Portable Paper* is providing a valuable service; and thank you for allowing us the opportunity to share our experiences.

Michael A. Jackson, Los Altos, CA

THE PORTABLE PAPER

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Microref Guides, Squeezing 1-2-3?

Regarding Donald Harkleroad's letter in Vol. 2, No. 6 (staying charged abroad): Don's problem about how to charge his Portable Plus (along with his 9114 Disk Drive and ThinkJet) has more solutions than already mentioned in *The Portable Paper*.

1. Buy one or more of HP's 220 v. 50 Hz European chargers for the HP 110/Plus. They come with modern European standard plugs and are readily available from HP Direct Marketing in the USA as HP 820668. With the "European" charger you'll still have problems because the French, Germans, Swiss etc. all have their own ideas about sockets including variations with the vintage of the building. But plug adapters to mate with HP's standard European charger can easily be found locally.

2. Use HP's USA 120 v. 50/60 Hz chargers with the CORRECT Franzus converter, NOT the one Donald probably tried. That one (which Franzus supplies in some of its traveler's kits) is just a diode which chops off half of the 240 v. sine wave to give power (but NOT AC voltage) equivalent to 120 VAC for RESISTIVE DEVICES ONLY (portable irons, space heaters without fans, etc.).

Franzus also makes a miniature step-down transformer (about 1.5″ × 1.5″ × 4″ ×) which truly converts full sine wave 240 v. 50 Hz AC to full sine wave 120 v. 50 Hz AC. It's hard to find but I bought mine in a luggage store near the Miami airport. It's sold separately and costs about $35. You can tell the two units apart because the diode one weighs under an ounce and is "rated" at 500 watts or more while the transformer unit weighs about four ounces and is rated for 50 watts (plenty since each charger draws only about seven watts).

3. Use the model 110A Power Cube/Recharger with the Franzus step down transformer for a compact equivalent to carrying three or four HP chargers.

After thinking about how we'll be using our new Portable Pluses, the biggest demand on Edisc memory will be our Lotus 1-2-3 files. These will be portfolios we manage for clients, price lists, inventories, and data entry files prepared in the field for later transfer to our heavy duty ENABLE and PARADOX data base systems at home.

This made me realize how much you could enhance the Plus' memory capability if you could provide a Lotus 1-2-3 file compressor like Turner Hall's **SQZ!!** or SoftLogic's **CUBIT**. We've tried both with our VECTRA 1-2-3 files and find that both of them consistently give compression ratios of 75 to 80 percent or better (75 % means 100K uncompressed becomes 25K compressed).

Would you please consider giving HIGH PRIORITY to enlisting one of the geniuses on your team to either adapt an existing or develop a new Lotus 1-2-3 file compressor optimized for the Plus? It should:

—compress by 67% or better (100K raw file = 33K or less when compressed),

—when installed, attach itself to 1-2-3 and automatically load whenever 1-2-3 is loaded (and unload when 1-2-3 is exited),

—automatically SQUEEZE any 1-2-3 file saved and UNSQUEEZE any squeezed 1-2-3 file when it is retrieved,

—take up no more than 64K additional RAM when loaded,

—be available in ROM/EPROM on a single chip from your company!

Surely such a utility would be a real winner in your product line. If a Plus owner has 1 Meg extra Edisc installed (HP's or your UK boards) and assigned half of the Edisc (500K) to Lotus files, this utility, at 67% compression, would turn that 500K into virtually 1.5 Meg Lotus file space, thus adding 1 Meg of effective extra Edisc memory!

Now the Plus with 1 Meg extra Edisc looks like 512K RAM plus 2 Meg Edisc plus ROM drawer space for 12 ROM chips. This will further enhance its appeal vis-a-vis floppy portables like the Toshiba 1100/1200 series, thanks to the Plus' lightning-fast RAM disk and ROM downloads, and the Plus' "Rip Van Winkle" slumber/instant wake-up-and-resume capability.

To change the subject, we bought the PC/MS DOS and Lotus 1-2-3 (2.0 included) MICROREF Quick Reference Guides from Educational Systems Inc., (3175 Commercial Ave., Northbrook IL 60062 (312) 498-3780), and are very pleased with them as a "portable" (5″ ×9″ × 9″ × 1/4″) alternative to carrying the impracticably bulky HP-equivalent manuals with us on the road.

In fact, they are so complete, so well organized (all 74 pages tabbed on both sides), and so easy to use (including a cleverly built-in "easel") that we now prefer them for office use over the manuals that came with our HP-110 for DOS and 1-2-3.

Although they are not cheap at $20 each, they are spiral bound and printed in two colors on a nearly indestructible plastic paper which takes pencil notes that erase very cleanly with art gum.

You might want to offer these compact guides through your catalog and include perhaps also the WordStar 4 and WordPerfect 4.2 versions, which I have never seen in a store.

On another matter, you wrote a while ago that your wife had created a mysterious file named "Lesson 1" while using The Editor and that DOS refused to recognize or delete this file.

PC Magazine suggests renaming the illegal file, i.e., **rename lesson?1 lesson-1**. Another solution we've found is to use **del lesson*.*** which will, of course, delete Lesson 1 and any other Lesson file.
Rodman Sharp, Sharp Associates, Santa Fe, NM

Don't Want To Return To PAM

I would like to see articles on how to operate all settings available under system configuration and datacomm configuration from batch files. As the system gets more loaded, particularly on the RS-232 port, it becomes time-consuming to have to reset between each application.

I have also received the Touchbase system modem (thanks for extremely fast shipping). At first I could not make it work and called Touchbase in New York. They were very helpful in advising that in the U.S., the two center wires are used for communication to the phone system while here in England we use the outer two.

After correction, the system worked well. You might want to include this tip to anyone else from the U.K. buying from you.
Ingemar Nilsson, Letchworth, England

Criticism and Recommendations

I recently received your last issue and your questionnaire which leads me to believe you are reviewing your goals and attempting to get feedback from your readers. I hope your questionnaire works.

I was one of your original subscribers (I started with an HP110) and your paper has been a lifeline to me as I was a complete novice in the use of computers. Recently I bought a used Portable Plus after looking at many other portables. My decision was prompted by the fact that your company exists. I have the greatest respect for your integrity and on the rare occasion when I have called, I have received everything I could ask for in terms of intelligent and courteous response; actually I felt a sincere desire on the part of your knowledgeable staff to help me.

But I do have criticisms of your paper and will voice them with the intent of telling you what I think would make it better for both you and me.

I would prefer a different format for the purpose of making the paper easier to read (and to reread when looking for specific items).

If I were editing *The Portable Paper* I would not mix advertising and text on the same page. For a reader, this is confusing. Also, I would finish articles (which should always be appropriately titled) without continuing them on rear pages.

In the table of contents, I would keep to the same format in all issues. As a reader, I want to look at the table of contents and know what page I want to turn to, and what kind of information I'm going to find there. When I look back through previous issues, which I do very often, I want to be able to find what I want very easily and quickly.

I would also try to think of better divisions of contents as reflected in the table of contents. To me, it is more important that something is a word processing program (for example) or a data base program, than whether it is located on the A or B drive.

In your paper I value ease of reading and identifying what is useful to me, and also not having to read the whole issue and be distracted by continually turning the pages back and forth, or by advertising. I also want to be able to refer to items in back issues without re-reading every issue. I appreciate articles which are well written in terms of organization and clarity, and particularly those with an opening sentence that lets me know whether or not I want to read the entire article.

I hope what I have written will be helpful to you. My point has been not specific recommendations but overall principles which I would like to see implemented in the future. With best wishes for your continued success and appreciation for all you have offered me in the past.

Connie Doolittle, Zollikon, Switzerland

[I hear you, and agree with most of what you say, especially about making things easier to find. Hopefully, the index to 1986 and 1987 issues will help. We plan to do some reorganizing of the format of The Portable Paper *in the future and will definitely keep your suggestions in mind—Hal.]*

Using Expert System Shells on the Plus

In Vol. 2, No. 5, p. 9 of *The Portable Paper* there was a note about the use of expert system shells on the Portable. I have used two expert system shells on my Portable Plus: ESIE (Expert System Inference Engine, Lightway Consultants, Tampa, FL) and Micro Expert (McGraw-Hill). ESIE is a software program which runs directly, without modification, on the Portable Plus. However, ESIE requires the IBM PC simulator to run on the HP150. Micro Expert is written in Turbo Pascal and the source code is included on the disk. Therefore, using the Turbo ROM Chip, it is possible to compile the program for use on the Portable Plus or HP150. Both programs are good introductions to the design and use of expert systems.

I have used ESIE to design an expert system for determining the probable human risk for teratogenicity based on animal test data (see enclosed reprint). It was my first attempt to design a knowledge base and has many obvious limitations. Further refinements in the knowledge base are being explored using Micro Expert.

I have enjoyed using both expert system shells on my Portable Plus. Each has given me some insight into the strategy and logic needed for preparing a knowledge base. I would recommend both of these programs to interested readers.

Donald R. Mattison, M.D., University of Arkansas for Medical Sciences

Inkjet Paper Complaints

The letter from Sergio Biguzzi in *The Portable Paper* (Vol. 2, No. 4) and the letter from Harry McLean (Vol. 2, No. 6) are very interesting to me because of the complaints from our staff about the quality of Inkjet paper. The original HP paper (92261N 20C-0193 8-84) was well received by our secretaries, chemists and engineers, and because we had bought large quantities we did not need to reorder for some time. When its replacement (92261N MODUO186 29C-1636) came in and we began to use it, there was immediate, negative response from our staff.

Letters and discussions with HP were pleasant but produced no real improvements, and we went to other suppliers. INMAC has a paper that our people feel is acceptable, and they provide service nationwide. Moore also has an acceptable product, but Boise-Cascade is our preferred supplier.

The letter from HP engineer McClean claims that HP knows what is best for its customers. This is exemplified by the statement "We believe that the paper we have selected best meets our requirements." This seems to indicate that the customers' needs are secondary to those of HP. This leads us to a situation where the customer gets the final vote by doing what we have done and going to another supplier.

Another subject of reader interest has been that of statistics. I have been using a program called "Sigstat" from the Significant Statistics Co. of Provo, Utah for the last two and a half years. The program is the Bio Med Pac from UCLA and is based on a card format which might be difficult for some people to grasp. This is a very comprehensive statistical package.

Two other programs that work on the HP-110 are Statpad by John Clements and the Dennison Stataids, Statcap, and Statrol. These are advertised in the magazine "Quality Progress."

John Henderson, Federal Way, Washington

Success With Portable Plus Speed-Up

I was very pleased with Sam Chau's article on speeding up the Portable Plus (Vol. 3, No. 1). I am not an expert in handling (and understanding) IC's, but I managed to speed up my Portable Plus within 2 hours, and the "upgrade" is paying. Before my intervention I tested the speed by creating a 26 x 255 matrix of random-numbers in Lotus 1-2-3 (version 2.01); this took 22 seconds and saving this file (140770 bytes) to the A drive took 30.5 seconds; the NEC V30 marks are 10.5 seconds and 23 seconds, respectively. ECM and MS Word are pleasantly faster, especially Search and Find or Replace routines. Indeed, the Modem and RS232 tests do fail (as mentioned by Mr. Chau) producing the numbers 218 and 216 as error-codes, but the Timer Test (not mentioned by Mr. Chau) also fails, and yields the same error-code numbers.

I have studied the Technical Reference Manual and I'm quite sure that my 128K Portable Plus can be upgraded internally to 512K of RAM, by replacing the 8K chips with 32K chips. Am I correct in thinking that some peripheral IC's must also be replaced or changed, and that the address 01C0h in the configuration Eprom must become four, whereupon the Config Eprom Checksum in address 01BE also must be changed? Because I'm not certain of this I need the insight of a man like Mr. Chau. Therefore I would like to ask him if my suggestion is correct. I think articles of the kind Mr. Chau produces are attractive to many users who want to "tune up" their Portable Plus. I hope there will be many follow-ups!

R.M. Franquinet, Arnhem, The Netherlands

Reaction To ROM Delays

We all appreciate your efforts in regard to ROM's and we know how humiliating these delays are for you. If they don't come in until 1990, that will still be a lot better than HP has been willing to do lately!

Hang in there, and keep up the good work.

J. Michael Mooney, President, B&M Distributing, Heavener, OK

[We are finally shipping Webster's spelling checker on ROM and our Super-ROM (five excellent programs on one chip). By the time you read this we should

(continued on page 39)

110% Making More of Your HP Portable

by Hal Goldstein

HP Announces New DeskJet Printer

HP has recently announced a new entry in the printer market that should perk the interest of many HP Portable users. For under $1000, portable and desktop users can purchase the latest quantum advance in inkjet technology, the 14.3 pound DeskJet printer. We are certain that the combination of its price and quality will quickly make this printer into a real winner in the printer market.

The Deskjet prints with virtually the same greater-than-letter quality (300 by 300 dots per inch) as the $2600 HP LaserJet II. We were sent a sample of two identical pages filled with high-quality text and graphics. One page was printed by the LaserJet and the other by the DeskJet. The slightly darker output of the LaserJet was the only discernible difference. The quality of the type and bar charts were exactly the same.

The DeskJet prints two pages per minute at letter quality, and four pages per minute in draft mode. The DeskJet works with most papers including good quality photocopy paper. It gives excellent results on letterhead bond paper. HP specifies, however, that InkJet paper should not be used.

Since the LaserJet has become such a popular printer, almost all major software packages support the LaserJet's printer control language. The DeskJet responds to these same LaserJet commands. As of February 1, over 60 other software packages support additional DeskJet features.

HP110, Portable Plus, and Portable Vectra users can use the DeskJet printer with no difficulty. Although the DeskJet is not a portable, it still can be carried around. (We'll be looking into providing a carrying case for the printer.) The printer weighs 14.3 pounds, and is 8 inches tall, 17.3 inches wide, and 14.8 inches deep. That's slightly more than the length and width, and twice the height of a Portable Vectra computer.

To use the DeskJet with an HP110 or Portable Plus, you need a serial cable, HP9221P. You must properly configure PAM's **System Config** for a serial printer. Then in the **Datacom Config** menu, you must set the Baud rate and other serial parameters as defined in the DeskJet manual.

The DeskJet comes standard with both a serial and parallel port. This means that you can connect the Portable Vectra to the DeskJet with a standard printer cable (different than the parallel ThinkJet cable). If you have a serial adapter card for the Portable Vectra, you can also connect the printer serially to the Portable Vectra. Similarly, you can connect the DeskJet via the serial or parallel port to most any microcomputer. Another nice DeskJet feature is the automatic single sheet feeder (up to 100 sheets) with a front-loading design for quick reloading of paper. The printer accommodates U.S. letter, legal, and European A4 paper sizes, as well as manually-fed #10 envelopes.

ThinkJet users who have tried to control the printer with a software escape sequence will appreciate the front panel. From the front panel you can control the font, the letter or draft quality, and the envelope-feed mechanism. From the panel you can also advance the printer a page (form feed) or you can move the paper, line by line, forward or backward.

The printer comes standard with Courier normal and bold depending on the font selection. You can select 5, 10, 16.67, and 20 characters per horizontal inch depending on printer mode and font selection. Depending on the font, you can select 6 or 12 lines per inch.

The inkjet cartridge ($18.95 retail) prints approximately 1.2 million draft characters, and .5 million letter quality characters. At 2500 characters (bytes) per page that's 2000 pages letter quality and 4800 draft mode.

You can expand the DeskJet's capacity to print different fonts (type styles). The DeskJet comes standard with two slots for font cartridges. Prices for the font cartridges are between $75 and $125. An assortment of proportional type fonts, ranging from Letter Gothic to Helv 14 point to various Times Roman points sizes are available. Alternatively, for $150 each you can purchase up to two 128K RAM cartridges that can store soft fonts (fonts generated from software and sent from the computer to the DeskJet). There is also an Epson FX-80 printer emulation Cartridge if your software does not know about HP printers.

The DeskJet retails for $995. *The Portable Paper* subscribers can purchase the DeskJet through the Portable Equipment Exchange for $879.

HP SPECIFICATIONS SHEET

Print Method: Plain paper drop-on-demand thermal inkjet printing.

Print Speed

Letter-quality mode: 120 cps at 10 cpi
Draft mode: 240 cps at 10 cpi

Command Language and Emulation

HP PCL printer language PCL Level 3; Optional Epson FX-80 emulation

Text Resolution and Character Cell Structure

Letter-quality mode: 300×300 dpi, 30(h)×50(v);
Draft mode: 300×150 dpi, 15(h)×50(v)

Graphics Resolution

Full-page 75, 100, 150, 300 dpi

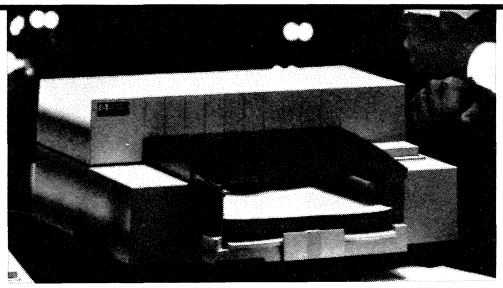
Character Sets

HP Roman8, PC8, PC8 (Danish, Norwegian), ASCII, ISO 7-bit languages (U.K., Germany, France, Italy, Norway, Sweden, Spain, Portugal, JIS ASCII), ECMA-94 Latin1, Legal. Other character sets are available depending on font cartridge selected.

Printing Format

Pitch: 5, 10, 16.67, or 20 cpi, depending on printer

HP's new DeskJet Printer



Laser-like quality for under $1000!

The new DeskJet printer is another engineering breakthrough for Hewlett-Packard—a personal printer that satisfies four of your printing needs at once:

1. Laser-like quality. The DeskJet's high-quality text and graphics output is virtually indistinguishable from that of Hewlett-Packard's LaserJet printer.

2. Compact desktop design. The DeskJet weighs in at only 14 pounds, and takes up less than 2 square feet of desk space. It's the perfect printer either for Portable users or for anyone wanting a letter-quality printer.

3. Ease of use. The DeskJet's built-in sheet feeder holds up to 100 sheets at once, and loads from the front in just seconds. In addition to computer control of all functions, you can manually operate form feed, line feed in both directions, and selection of type fonts and pitch (characters per inch).

4. Low price. Retail price of the DeskJet is an amazingly low $995. Portable Paper subscribers pay only $879. That's about ⅓ the retail price of a LaserJet!

Whether you print memos, letters, reports, spreadsheets, business graphics, or all of the above, there is no better printer value on the market today than the new DeskJet from Hewlett-Packard.

See for yourself: Order a compact, laser-like DeskJet at our risk today.

	Retail price	*Subscriber price*
HP DeskJet printer	**$995.00**	**$879.00**
Extra ink cartridge (one is included free with the unit)	**18.95**	**17.50**
Serial cables:		
For Portable Vectra, IBM PC	**40.00**	**35.00**
For IBM AT, HP Vectra	**55.00**	**49.00**
For HP110 and Portable Plus	**40.00**	**35.00**
Parallel cable:		
For Portable Vectra, IBM PC	**55.00**	**49.00**

For prices on font cartridges, RAM cartridges, and other accessories, please call us at 515/472-6330, or see the enclosed Portable Equipment Exchange brochure.

(515) 472-6330

The Portable Equipment Exchange

—a division of Personalized Software

P.O. Box 869, Fairfield, IA 52556

HP'S AMAZING DESKJET PRINTER —PARTIAL LIST OF FEATURES

- Third-generation ink-jet technology: Prints on common office paper at 120 characters per second (2 pages per minute) for laser-quality text, and 240 cps for draft quality.
- Handles letter and legal size paper as well as #10 business envelopes.
- Multiple type fonts: Courier, Courier Bold, and Courier Extended are built in. Two cartridge ports handle additional font cartridges (12 are available, each with 4 or more fonts). Cartridge ports also accommodate 128K RAM cartridges for "soft" (computer-generated) fonts.
- Prints at 5, 10, 16.67, or 20 characters per inch; point size 6 or 12; normal, bold, expanded, underline, double underline, superscript, subscript, and more. Italic is available in optional cartridges.
- Parallel and serial interfaces and a 16K byte print buffer are built in.

RECOMMENDED FOR:			
HP110 Portable	•	Portable Vectra	•
Portable Plus	•	HP150	•
IBM PC and compatibles			•

mode and font selection
Point size: 6 or 12, depending on font selection
Style: Upright
Stroke Weight: Normal or Bold, depending on font selection
Typeface: Courier
Other print features: bold, expanded, underline, double underline, super/sub script. Also half-height and half-width, depending on printer mode and font selection. Italic available in optional cartridges.

Paper Size

U.S. letter (8.5×11-inch); U.S. legal (8.5×14-inch); European A4 (210×297 mm); #10 envelope (4 1/8 × 9 1/2 inch); Paper Weight: 60-90 g/m2 (16 to 24 pound)
Note: The DeskJet printer works well with most types of paper, including that typically used for photocopying. Bond paper, such as letterhead, gives excellent quality. JetPaper should not be used, however.

Paper Handling

Built-in sheet feeder (up to 100 sheets); Manual envelope feed

Control Panel

On-line, Prime, FF (Form Feed) Envelope Feed (Up and Down Arrow Keys), Font, Mode, Up Arrow, Down Arrow, Reset

Interfaces

Dual I/O: Centronics parallel and RS-232 serial

Environmental Ranges

Temperature: 10 ° C to 40 ° C (50 ° F to 104 ° F) maximum operating; 15 ° C to 35 ° C (59 ° F to 95 ° F) recommended for best quality; -40 ° C to 60 ° C (-40 ° F to 140 ° F) storage

Humidity: 10-70% RH non-condensing

Acoustics: (per ISO 7779 standard), Sound pressure level-LpA: 44dB(A) @ front bystander position

Power Requirements

Power modules: 100v., 120v., 220v.,240v. AC (+10%, −10%) 47.5-63Hz
Consumption at 120 VAC, 60 Hz: 8 watts maximum non-printing, 25 watts maximum printing

Physical Specifications

Height: 20.2 cm (8″), Width: 44.0 cm (17.3″), Depth: 37.7 cm (14.8″), Weight: 6.5 kg (14.3 lb.)

Buffer Size: 16 K bytes

Product Certifications

UL, CSA, NEMKO, TUV, VDE/FTZ, SETI, SEMKO, LCIE, DEMKO, KEMA, SEV, SECV, Homologation (Spain), VCCI (Japan), SABS (South Africa) compliance, FCC Class B Certified per FCC Rules, Part 15, Subpart J, when used with a Class B computing device.

Reliability and Estimated Usage

MTBF: 20,000 hours. 2,000 hours power-on and 12,000 printed pages per year; 50 pages per day average use

An HP110/Portable Plus User's View Of The Vectra

I first encountered the HP110 as an HP engineer, and it was love at first sight. When I left HP, I purchased an HP110 and formed our company, Personalized Software, around the machine. I now use the Portable Plus. I believe that (even

without full IBM compatibility) the Portable Plus is the best, most practical portable in the marketplace.

Time moves on and for many reasons HP has (at least temporarily) dropped the Portable Plus RAM/ROM disk-drive approach and introduced the mechanically disk-based Portable Vectra.

After using a dual floppy Portable Vectra regularly for a month, here are some of my thoughts.

If you travel a lot and want to work on planes, in airports, hotel rooms, or client's offices, pick up a used Portable Plus or an HP110. If you require IBM compatibility there are a number of excellent laptops from which to choose. However, if you want the advantage of both an IBM compatible desktop and a true portable in one machine, the HP Portable Vectra is the way to go.

I use the Portable Vectra as my main computer at work. I removed the LCD screen and attached it to a $119 GoldStar monitor. A few days ago I started using a GoldStar EGA color monitor (see Vectra Views in this issue for more details).

This setup takes a relatively small amount of space on my desk (small footprint). Because the Vectra keyboard is so good, however, the Portable Vectra with a monitor is to my thinking equivalent to a desktop computer.

If I want to work at home I simply detach the monitor and attach the LCD screen that comes with the unit—a process that takes less than a minute. Actually, I am starting to leave my LCD at home. That way, all I have to carry in my briefcase is the 12 pound base unit. The two disk drives fold in and can hold two 1.44 Meg disks, usually all I need for an evening's work. Now that I've sprung for the $495 GoldStar EGA monitor, I'll start using the GoldStar monochrome monitor for home use. I'll use the LCD screen only for small trips when I need the IBM compatibility and the battery-powered capability of the machine.

IF I WERE HP . . .

I think HP has two winners with the Portable Plus and Portable Vectra. If I were HP, I would aggressively market both machines, and bring out an IBM compatible Portable Plus as soon as possible. I would bundle a monitor with the Portable Vectra and advertise it as a portable and a desktop in one machine. I would advertise the Plus as the most powerful, truly portable, laptop in the marketplace. I would use testimonials from Portable Plus users like you (our readers). These testimonials would both convey your tremendous enthusiasm for the machines as well as contain practical examples of how you use your Portable Plus.

1988 Subscriber's Disk Update, And Related Tips

Based on your phone comments and letters, many of you have found the programs on the 1988 Portable Paper Subscriber's Disk to be quite useful. However, there were some difficulties and points of general interest that we will discuss here.

USING THE DISK WITH ARCE

We wanted to include a good number of programs on the 1988 Subscriber's disk, still leave a little scratch space on the disk, and keep some sense of order. To do so we opted to archive the files using the popular and widely distributed **arc** program. **arc** does two things. It groups a collection of files into one file, and it also shrinks each file so that the file consumes less memory.

(Some of you may wonder how it is possible to "shrink" files. There are any number of ways of encoding information stored in a computer file. Some of those ways can "shrink" files by as much as 70% over standard ways of storing data. Files are not usually stored in such "shrunken" formats because most programs would have to work harder—and thus take longer—to manipulate these "shrunken" files. The additional demand on the programs would therefore require them to be larger.)

To use any of the programs on the 1988 Subscriber's Disk you must "unarchive" the files. For example, to use the IBM formatting program, you must issue the **arce formibm** command from PAM or DOS. (Actually, you may have to prefix **arce** or **formibm** with, say, **a:** or **c:** depending on in which drive the particular file lies.) As archived, **formibm.arc** takes up only 1393 bytes. When it is "unarchived" using the **arce formibm** command, it is shown to contain **formibm.com** (4480 bytes) and **formibm.doc** (370 bytes).

In order to be able to archive (squeeze and combine) files yourself, you must obtain a copy of the shareware **arc** program or an equivalent. You can do so by purchasing the "Best Of DOS Tools" disk or ROM from Personalized Software, by downloading it from CompuServe, or most any other bulletin board. (You are asked to pay the authors of **arc** an additional shareware fee unless you purchase our ROM—we've already paid the fee).

We inadvertently called the **arce** file in our documentation of the 1988 Subscriber's Disk, **arce.exe**. In fact, its actual name is **arce.com**.

IBM FORMAT ON THE HP9114

One of the most popular programs on the 1988 Subscriber's disk is **formibm**. By using **formibm**, an HP110, Portable Plus, or IBM PC compatible with an HP-IL card can format an HP9114 disk in IBM format rather than HP format. Once formatted you can read files from, and write files to the HP9114 disk with your HP Portable or IBM PC with the HP-IL card. Then you can take the disk to your IBM PS/2, Toshiba laptop, or Portable Vectra 3 1/2 inch disk drive and read from or write to the disk.

Roger Smith of Dallas gave me a call saying that we had saved him several thousand dollars with that program. He said that despite our caution in the documentation, the program works fine with his HP110. He can now interchange 3 1/2 inch disks with his office computers, and he does not have to buy a new portable computer. He has only to format the disks originally using the **formibm** program.

The real thanks goes to the Corvallis engineer (who prefers to remain anonymous) who wrote the program. He devoted much of his own time to get the program to us in time for inclusion in the 1988 Subscriber's Disk.

There is an intermittent bug in the program that we and several users have experienced. Occasionally, the disk won't format and the system locks up or the disk drive keeps spinning indefinitely. No harm is done. Just reboot the system (**CTRL Shift Break**) and try again.

PASSWORD PROGRAM CAUSES HAVOC WITH SOME

Some of you have called in a panic, very frustrated, and quite annoyed with us. You claimed the password program did not work as we said it would in the documentation. (Many readers not interested in the password program should still read this section for some useful tidbits as to how we solved the problem.)

The password program **pass** runs on the HP110, Plus, and Portable Vectra. When you install **pass**, you must type the password before you can use your portable.

Here is the problem. The documentation says that if you install the password program, but do not define a password yourself, typing the default password "TESTPASS" allows you access to your computer. However, some users called to tell us that they typed the default password, and they still couldn't get into their systems. That meant they couldn't use their computers at all, much less access any of their electronic disk files.

The situation was made worse when they discovered that if they had unarchived **pass** on their electronic disk and had at some time gone back to PAM, they were now required to enter this default password to use their systems.

Portable Vectra users had no serious problem. They could simply start the computer (re-boot) off a disk other than that where the password program resides.

However, HP110/Plus users do not have that luxury. The system automatically boots off the electronic A disk where the password program resides.

Fortunately for those who printed out their documentation, we did describe a method for bypassing the password program. This method is important for any of you who ever create or alter a file named **config.sys** on the A drive and make a mistake. (The password program works through the use of the line **shell=a:\pass.exe** in the **config.sys** file. The first thing an MS-DOS computer does when booting up is look for a **config.sys** file for special instructions. In this case the special instruction is "run the password program, **pass.exe**.") In order to boot the system and bypass the A drive and its **config.sys** file, do the following: While The Portable is off, press the **CTRL Shift** and **Extend Char** keys. Then press the contrast key while still holding down the other three keys. Do not release the **CTRL Shift** and **Extend Char** keys until PAM reappears.

The other method for regaining use of the computer is more drastic. It requires losing all the files on the Edisc. Remove the battery, and you will delete the **config.sys** file (and everything else, including the default PAM **f6 system config** settings). We all regularly back up our Edisc work onto a floppy, right?

The fact that we got calls saying that the default password "TESTPASS" didn't work surprised me. Two of us at Personalized Software tested the product before putting it on the 1988 Subscriber's Disk, and it worked fine. However, after receiving these phone calls, I installed the program and to my amazement, the default password did not work.

I took out a copy of the **nu** part of The Norton Utilities to examine the **pass.exe** program—the program that requires the password. My thinking was that when we rewrote the documentation for the password program, we had perhaps made a typographical error when naming the default password. The idea was that the Norton program would reveal the real default password.

I issued the command **nu pass.exe**. The exact contents of the file **pass.exe** appeared on the screen. Since **pass.exe** is a program file rather than a text file, I stared at a bunch of meaningless symbols. However, the word "TESTPASS" did appear in the rubble of funny characters.

After staring at the Norton screen a few minutes, I finally realized the problem—a classic situation for anyone who has used computers for a while. What we all did when prompted for the password was type "testpass" rather than "TESTPASS"—the computer program only recognized the upper case form of the word! "TESTPASS" works fine.

PROCOMM INCLUDED ON DISK

Many people consider shareware program **procomm** the best communications package for the IBM PC (and hence Portable Vectra). For Portable Vectra users (it won't work on the HP110 or the Portable Plus), we included **procomm** on the 1988 Subscriber's Disk in file **prcmdocp.arc**. However, we neglected to mention it in our documentation or promotional material. Remember, if you use the program, please send the authors of the program their requested shareware fee—it's still much cheaper then most commercial packages.

YOUR FAVORITES

We've received rave reviews for several of the programs. In particular, many of you have been waiting for a long time for a program like **formibm**, so that you can interchange disks between your IBM compatible 3 1/2 inch drives and the HP9114 drive.

Another favorite is **jetctrl** by Jeffrey McKay and *The Portable Paper* columnist and HP Portable software author Paul Grimmer. **jetctrl** works only on the Portable Plus. It is a true "memory resident" program. This means that at any time (e.g., you can be in the middle of Lotus or The Editor), you can press **Extend char** with the space key and pop up the **jetctrl** menu. With **jetctrl** you can instantly change a ThinkJet font (e.g., to compressed), the lines per inch, bold, and much more.

Another favorite (contributed, again, by Paul Grimmer) is **mm**. When **mm** is run on the Plus, MemoMaker is invoked. However, now the **backspace** key not only moves the cursor to the left but deletes the character it moves over. To obtain the same result using the MemoMaker **f7 Help** key on the HP110, see *The Portable Paper* Vol. 1, No. 1, p. 2.

Graham Collins contributed another favorite, **addr**. It enables MemoMaker users to easily insert a Time Manager address into their letter by having only to type the last name. Using Graham's program, you can also address window envelopes automatically.

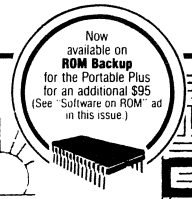
We are already receiving requests for enhancements of **addr**. You can write Graham in care of Hewlett Packard, King Street Lane, Winnersh., Wokingham Berkshire RG11, England.

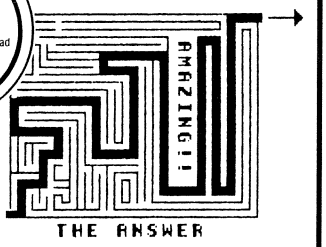
Symphony 2.0 On The Plus

While the HP110 was being developed, HP originally planned to include Lotus Symphony built into ROM.

(continued on page 42)

At last! Graphics
for the Portable and Portable Plus



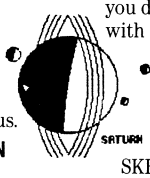


by Hal Goldstein
President, Personalized Software

Paul Grimmer has done it again.

He's the author of two of our best-selling programs: SideWinder (the sideways printng program for the HP Portables) and LINK (the program that lets you transfer data back and forth between HP hand-helds and Portables, printers, and other peripherals).

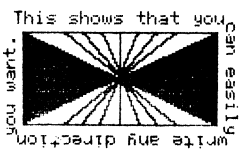
Now he's developed SKETCH, a fabulous graphics program designed for both the HP110 Portable and Portable Plus.



CURSOR BECOMES DRAWING PEN

Using SKETCH couldn't be simpler:

Put SKETCH in *draw* mode, and your cursor becomes a "pen". The pen can either be "up" or "down." When it is "down," it draws wherever you move it. When it is up, you can move it around the screen without affecting the drawing. (You set the cursor up or down simply by pressing "U" or "D." You also can set the cursor speed, and can toggle between a faster speed and a slower speed in an instant.)



The pen also has an "eraser": Just press "E," and when the cursor is down it will erase whatever it encounters.

DOZENS OF HANDY FEATURES

But that's just the beginning. SKETCH also lets you draw diagonals, boxes, circles, and arcs—each with a single key.

(If you have a mouse, you gain even more convenience: Move the mouse in any way you want, and the cursor follows instantly. See ad on the Logitech Mouse for the Portable Plus in this issue.)

SKETCH also lets you fill closed shapes with light or dark solid—or even invert the entire screen (light areas become dark and vice-versa)—with a single keystroke.

With SKETCH, you can create text in any of 5 different character sets and place the text anywhere in your drawing—including sideways or even upside-down.

SKETCH lets you save part or all of any drawing for future use, or you can print directly from the screen onto your ThinkJet or QuietJet pages.

RECOMMENDED FOR:	
HP110 Portable	●
Portable Plus	●
Portable Vectra	
HP150	
IBM PC and compat.	
Available on ROM Backup for the Portable Plus	

You can also import graphics screens into SKETCH from Lotus or any other graphics program.

SKETCH doesn't limit the size of your drawing area to the size of your screen. The total drawing area is 70% bigger than the screen on the Portable Plus, and more than 150% bigger than the screen on the Portable. As you move the cursor past your screen's borders, SKETCH automatically shifts you into the areas that were off-screen.

Now you might be expecting that all these great features come at a high price in terms of memory space. But they don't. The entire program takes up only 44K! (As I said, Paul Grimmer of Southern Software has done it again.)

USING IS BELIEVING

No matter how fired up you might get by reading about SKETCH or looking at the few samples we've shown of what it can do, there is no substitute for actually getting your hands on this wonderful program and trying it out for yourself.

Remember, with our money-back guarantee, if you are not completely satisfied with SKETCH within 60 days, you can return it for a full refund. Why not order a copy today?

SKETCH graphics program . . . . . $80.
$75.95 for Portable Paper subscribers.

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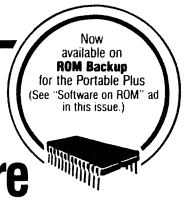
Shelp



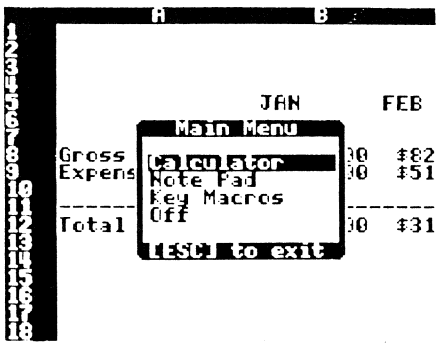
Instant Access Pop-ups for the Portable Plus: Calculator • notepad • macros • and more

"A great, easy-to-use productivity booster. If there's one program every Portable Plus owner should have, it's Shelp."—Hal Goldstein, Publisher, The Portable Paper

Recommended by Hewlett-Packard, and used by more than 1,000 of their employees.

It's a program called **Shelp** *(shell + help)*, and it runs on the Portable Plus from within any non-graphics program. Here's all you do:

Press [Ctrl] [Shift] [Extend char] and up pops the Shelp menu, right in the middle of your application (Lotus in this example):



The menu gives you 4 choices: Calculator, Notepad, Key Macros, and Off.

Choose **Calculator** and get a 4-function calculator that works just like a pocket calculator with memory. You can:

- save results in ten different storage registers and retrieve them again with two quick keystrokes
- "paste" results at the cursor location in whatever application you were using when you invoked Shelp.

Choose **Notepad** and a "scratch pad" pops up on your screen. Type whatever you want into it, exit to your application, and then recall the notepad whenever you want.

No more having to scribble notes on paper to remind you of phone numbers, things to do, or bright ideas!

Choose **Key Macros** and you can assign "strips" of up to 31 typewriter characters to any of the 26 letters in the alphabet. This saves you having to type the same phrase over and over again.

Example: If you type "United States" a lot, you could assign the entire phrase to the "U" key. Just move the cursor to "U" in the Keyboard Macros menu and type "United States."

To recall "United States," simply press [Ctrl] [Extend char], then [U]. Presto—"United States" appears at the cursor location in your application!

Choose **Off** and your Portable Plus turns off without having to return to P.A.M., and without having to save your application file. When you turn your computer back on, you'll be in the same place in the same application, with no data lost.

All the capabilities of IBM-PC programs like Borland's SideKick and SuperKey? Certainly not, but Shelp's the only such program for the Portable Plus. It's a clean, easy-to-use, and highly useful helper you'll want at your fingertips always.

Shelp runs on the Portable Plus only. It works with Time-Manager, MemoMaker, Reflection 1, Lotus, and any other non-graphics program. (Shelp does not run with MS Word.)

Shelp was written by Randy Salo, the former HP engineer who authored MemoMaker on the original HP Portable.

Shelp . . . . . $55 ***($49.95 for Portable Paper subscribers)***

60-day no-risk trial: If, after 60 days you are dissatisfied with this product for any reason, you may return it for a full refund. **To order,** use the postage-paid form at the back of this issue, or send check or credit card number to: Personalized Software, P.O. Box 869, Fairfield, IA 52556 515/472-6330

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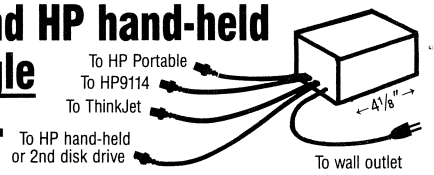
SideKick and SuperKey are registered trademarks of Borland International, Inc.

Power your Portable, ThinkJet, HP9114, and HP hand-held from a single wall outlet.



Can't plug your Portable, ThinkJet, HP9114, and HP hand-held into the same wall outlet because the recharger cubes are too big? Here's the solution:

The Model 110A Power Cube/Recharger from Summit Concepts.

The Model 110A has five power cords. Four are HP cords that plug into your HP Portable, ThinkJet, HP9114 disk drive(s), or HP hand-held (HP41, 71, 75, series 80, etc.). The fifth is a conventional AC cord that plugs into the wall and powers the other four.

Get rid of that tangle of extension cords, power strips, or whatever else you've been putting up with. Order a Model 110A Power Cube/Recharger today.

Model 110A
Power Cube/Recharger $89.95
$84.95 for Portable Paper subscribers.

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dBXL
PLUS, P. VECTRA

DBase III Clone Works On The Plus
by Hal Goldstein

The good news is that WordTech system's DBase III workalike can be made to run on the Portable Plus (and HP150). The bad news is that you really need an HP or SoftWord 1 Meg drawer to use it and the screens refresh themselves slowly.

INSTALLATION

Last issue we reported our frustrations in trying to install dBXL on the Plus. We discussed the problem with WordTech technical support, and they suggested a solution that worked. When you run the dBXL install program, you must lie when it asks you "Are you installing dBXL for the first time (Y/N)?" Tell it **n**. From then on everything is smooth sailing. (Run the install program from a backup of your master disk or from the Edisc. You need to have the install files and **dbxl.exe** on the same disk.)

When you are prompted for terminal type during installation, select ANSI terminal. Next you will go through a straightforward ten minute installation procedure in which you define for dBXL the non-alphanumeric keys such as the cursor and function keys. In order to be successful in the installation, you must have initially selected **Alternate Console Mode** from PAM's **f6 System Config**.

MEMORY CONSTRAINTS

Once installed, dBXL is ready to use. To run dBXL you absolutely need the following files: **dbxl.exe**—255K bytes, **dbxl.ovl** - 296K bytes. Most users will want the message file, **dbxl.msg**—55K. If you have several megabytes of Edisc space, and you are traveling, you might also want the on-line manual, **dbxl.hlp**—319K bytes. Otherwise, leave it on the C drive.

The other big memory crunch is that dBXL requires 500K of internal memory to run. The documentation recommends that you use 512K, or lose speed on the indexing and sorting procedures. In other words, to run dBXL (with the message file but without the manual) you need about 1,118K of memory. Therefore, if you had a 512K Portable Plus and a 1 megabyte memory drawer, you would have 418K left for dBXL data, program, and index files.

Of course, you can run dBXL off your HP9114 disk drive or store files there. But then you sacrifice speed of operation. By experimenting, you will find the optimum way of dividing up your files between the HP9114 and the Edisc as your application requires. Alternatively, if you want a relatively fast dBASE machine and want room for lots of data, and you don't want to spring for a SoftWord drawer, you can remove the ROM drawer and insert a second HP 1 Megabyte drawer.

PERFORMANCE

I ran dBXL both off the C drive and from the internal disk. Naturally, dBXL on the Edisc was significantly faster. In either case the screen-refresh function left a little to be desired. It takes from 2 to 5 seconds for the contents of one screen to change to another. I found this lag a bit annoying at times but mostly still acceptable. However, you must be careful to avoid repeated cursor moves to see data off the screen or else the screen may have to refresh itself each time the cursor key is pressed. (Page up or down can be used instead.)

To test dBXL—dBASE compatibility, I copied a small 50K name and address file and a program file from our IBM compatible. These files came from a dBASE environment that we use to keep track of our customers and leads. Using dBXL on the Portable Plus, I was able to edit the program, index the file, add names to the file, and run the program printing addresses in label form on the ThinkJet.

In general the dBXL menu structure is similar but not identical to dBASE III. Most of the differences are cosmetic, like the dBXL > prompt as opposed to the dBASE III . prompt. Some of the menu sequences are slightly different, but nothing that I encountered would confuse a dBASE III user.

RECOMMENDATIONS

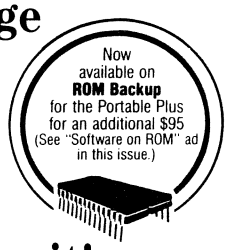
On a 1.5 Megabyte Plus, dBXL can be used for data entry. Our data entry person can use the Plus at work or home to enter names and addresses. dBase III programmers can use dBXL to create and test programs. If you have the memory or are willing to use the HP9114 disk drive, there is nothing you can do in dBASE that cannot be performed in dBXL.

If you can live with the limitations we described, and you need dBASE III compatibility, dBXL is, as they say, the only game in town. Fortunately, dBXL is among the least expensive of the dBASE clones.

WordTech is scheduled to ship a new version of dBXL this month. Based on our discussions with WordTech, an added graphics section of the new version probably will not work on the Portable Plus or HP150. If the program grows significantly, and without advantage to Portable Plus users, we may be able to sell the version reviewed here rather than the new version.

Whether you want to learn programming or you're a seasoned programmer, the best programming language for your HP Portable or Portable Plus is

Turbo Pascal



—and our Turbo Pascal Starter Kit is the best way to buy it!

Here's why.

The Pascal programming language was originally designed for use at the college level in teaching the fundamentals of computer programming. Borland International enhanced the language, making it practical for actual programming use. Their version is called Turbo Pascal.

Today, Turbo Pascal is the programming language taught at most universities. The reason is that its underlying structure fosters good programming habits. It forces you to think in a modular way: You create self-contained, well-defined units and put them together to make a full working program.

GREAT WORKING ENVIRONMENT

Turbo provides you with an exceptionally good programmer's environment.

One aspect of this is Turbo's built-in text editor. It's a sophisticated WordStar work-alike that in itself is worth the price of the program.

Another aspect is Turbo's compiler*. In addition to being uncommonly fast (an amazing 80-100 lines per second), it is also uncommonly helpful: If the compiler encounters a mistake in a program, it stops compiling, gives you an error message, returns you to the editor, and takes you to the place in your program where the error occured.

The *external* environment for Turbo is also excellent: There are numerous books, articles, public domain programs, and even a CompuServe forum devoted to helping people use Turbo to full advantage.

With all these advantages and more, it's no wonder that Turbo Pascal is today's best-selling programming language for the IBM PC.

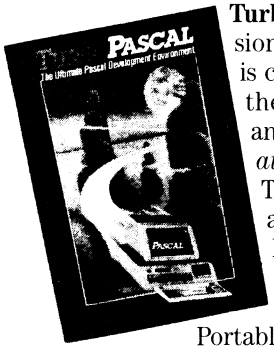
THREE-PIECE STARTER KIT CUSTOMIZED FOR THE PORTABLES

For Portable and Portable Plus users, there's yet another enormous benefit: *Turbo Pascal takes up less than 40K of memory*—and that includes its powerful built-in text editor.

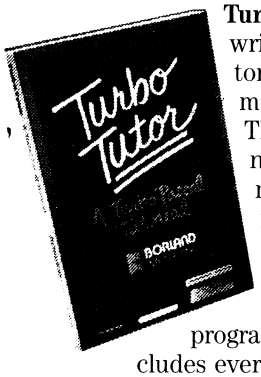
We are now offering Turbo Pascal in a special 3½″ disk version for your Portable or Portable Plus, ready to install from PAM.

Although you may purchase Turbo all by itself, we recommend our **Turbo Pascal Starter Kit.** It's ideal for novice and intermediate programmers alike.

The Starter Kit inludes **Turbo Pascal,** Borland's **Turbo Tutor,** and our own special disk, **Turbo Pascal Programs for the Portables.** Here's a rundown on each:

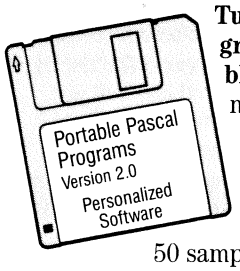


Turbo Pascal: Our version of Turbo Pascal is customized to both the HP110 Portable and the Portable Plus *at no extra charge.* The customization, authorized by Borland, allows the Turbo editor to use all the normal Portable editing keys (Extend Char—Delete Line, etc.). This saves you from having to learn many of the commands particular to WordStar.



Turbo Tutor is a well-written, interactive tutorial that includes a manual and a disk. The manual covers not just the fundamentals, but many fine points of Pascal programming as well; it is of value even to advanced programmers. The disk includes every example covered in the manual, already keyed in and ready to use. (Note: neither the IBM version nor the HP150 version of Turbo Tutor will run on the Portables; only our 3½″ disk version will.)

RECOMMENDED FOR:			
HP110 Portable	•	Portable Vectra	
Portable Plus	•	HP150	
IBM PC and compatibles			



Turbo Pascal Programs for the Portables is a great supplement to Turbo Tutor. Based on the principle of *learning by example,* the disk contains more than 50 sample Turbo Pascal programs, and every one of them runs on the HP110 or the Portable Plus. The programs range in length from ten lines of code to hundreds, and from simple (temperature conversion, games, arithmetic) to advanced (input/output, graphics, and more). Every program is included on the disk so you don't have to key in any of them—they're ready to run or to be incorporated into your own larger Pascal programs.

If you're into—or getting into—the highly productive world of programming, our Turbo Pascal Starter Kit will help you become an expert. Order your copy of this dynamite programming package at no risk today.

WHICH VERSION SHOULD YOU ORDER?
Portable Vectra users: Order the latest version, Turbo Pascal 4.0.
HP110 and Portable Plus users: Version 4.0 will not work fully on your machine, but Version 3.0 will. We have Version 3.0 in limited quantity; when we run out, it will not be available again. Please order now.

Portable Paper Subscribers:
The Turbo Pascal Starter Kit saves you $30 off the price of the three products purchased separately.

	Retail price	*Subscriber price*
Turbo Pascal Starter Kit (3.0 or 4.0) (includes Turbo Pascal, Turbo Tutor, Turbo Pascal Programs for the Portables)	**$189.85**	**159.95**
Turbo Pascal (3.0 or 4.0)	**99.95**	**89.95**
Turbo Tutor 4.0	**59.95**	**53.95**
Turbo Tutor (3.0)	**39.95**	**35.95**
Pascal Programs for the Portables	**49.95**	**44.95**
Turbo Pascal on ROM Backup for the Portable Plus (3.0)**	**95.00**	**95.00**

**ROM Backup version includes RUN.COM, a utility program that can save 10K of disk space from any program you compile with Turbo. Note: *You must own (or order) the disk version of Turbo in order to purchase the ROM Backup version.* See ROM Backup ad in this issue for details.

TO ORDER: See inside back cover.
Be sure to specify Version 3.0 or 4.0.

**Compiling* a program means getting it to meet the rules of syntax imposed by the programming language. A program will not run until it can be compiled.

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You can order dBXL from *WordTech Systems, Inc., PO Box 1747, Orinda, CA 94563, (415) 254-0900* for $199, or for $189 from us *Personalized Software, PO Box 869, Fairfield, IA 52556, (515) 472-6330*. If you order from us, we will include a backup disk that contains a pre-installed, Portable Plus (and HP150) version of dBXL. We probably won't be shipping the new version until early April.

We have not had a chance to test WordTech Systems dBase III compiler, QuickSilver. However, we expect that it will run without problem on the Plus. Any reader who is interested in testing both dBXL and QuickSilver more extensively, and would like to review both products for a 1.5 Megabyte Portable Plus (and for the HP150 if possible), should give us a call.

By Hal Goldstein

[Vectra Views contains information which specifically pertains to the Portable Vectra. In this column we note the latest developments on Portable Vectra products from Hewlett Packard, Personalized Software, and other third parties, and include specific tips for the Portable Vectra. Please feel free to contribute on disk or letter to Personalized Software, PO Box 869, Fairfield, IA 52556, or call (515) 472-6330. At the end of this column you will find a complete listing of products discussed.]

Creating An Optimal Portable Vectra Environment

ADJUSTING THE PALETTE

The first challenge many Portable Vectra users face is in rendering the Portable Vectra LCD screen as readable as possible. This problem exists because the Portable Vectra is capable of running color (EGA or CGA) monitors. "Smart" software programs are able to know that the Portable Vectra supports a high-resolution color monitor. Without prompting, these packages send a rainbow of colors to the Portable Vectra display. To the Vectra user, however, this rainbow appears as different shades of grey and oddly-formed letters on its LCD screen.

Readability ranges from excellent to barely legible, depending on what software you are running. Word processing generally is not a problem, but spreadsheets, pop-up programs such as Ready or SideKick, and disk organizers may pose some difficulties depending on your eyesight and what colors the software chooses.

With its **setup** command, HP offers a way out. **setup** lets you adjust the "palette" by allowing you to manually assign different shades of grey to different hues. Further, there is a procedure to automatically customize a palette for each program you run by using a simple **setup** command within a batch file. We will match palettes to programs in future issues. (Please, send us your favorite "palette number" for each of the programs you use. We will publish the results and save future users the trouble of doing this customization on their own.)

I have opted for a "quick and dirty solution." I made all the colors the darkest black as my default palette, which I use in all applications. In most cases this results in a screen at least as readable as that of the Portable Plus, with characters clearly formed. The problem with this solution is that many software menus use one color on top of another. The menus become unreadable with my solution since there is no contrast between the foreground and background.

Again, I look forward to your ideas as we will all benefit.

USING A MONITOR

The Portable Vectra serves as both a desktop and portable computer. In my office, it sits on my desk, attached to a monitor. The no-compromises keyboard, large disk capacity, small footprint, and relatively fast processor make the Portable Vectra an excellent desktop computer. When I want to take work home or on a small trip, I attach on the LCD screen and carry it away.

Using a monitor with the Portable Vectra couldn't be easier. A monitor's cable fits into the monitor adapter port (standard in the back of the Portable Vectra). It fits so snugly that I don't even bother screwing in the monitor cable. That way, I just unplug the cable when I need to take my Portable Vectra home or to another desktop in the office for file transfer.

In order to use an external monitor, first plug it in but leave the LCD screen attached. Then run the HP **setup** program, being sure to follow its menu instructions to configure the monitor. Save your monitor choice (monochrome, EGA, CGA). Next, "activate" the external monitor. The LCD goes blank since the Portable Vectra supports only one display at a time.

Removing the LCD is a matter of opening the Portable Vectra slightly in front. Next slide the release latches on the back of the computer toward the center, and you can lift the LCD off the computer. Replace it with the rear cover strip supplied with the Vectra and you are ready to go. To put the LCD display back on, simply reverse these steps. It is slightly trickier but after a few times you can replace the LCD unit in seconds.

The introduction of the Portable Vectra has opened up the world of monitors to me. One of the unique features of the Portable Vectra is its built-in support for color and high-resolution monitors—the Portable Vectra needs no extra hardware adapter card. Portable Vectra users can choose a CGA, EGA, or monochrome monitor.

INEXPENSIVE HIGH QUALITY MONITORS FOR THE PORTABLE VECTRA

Dave Sample, from our Kansas City HP dealer affiliate, knew I was searching for a quality alternative to high priced HP monitors. Dave is enthusiastic about GoldStar monitors; they are less costly without sacrificing quality, and carry a one-year warranty.

Erased your files? Get them back with The Norton Utilities!

Version 4.0 and Advanced Edition

"THE NORTON UTILITIES are among the most helpful utilities I've run across. I use them myself every day, and in my opinion, they're a must. Here's why."
By Hal Goldstein, Publisher
The Portable Paper

It happens to the best of us. One slip of a finger and a whole week's worth of text or data is past history. *But not if you have THE NORTON UTILITIES*!

Just type **qu** (for quick unerase), give the first letter of the name of the file you erased, and *the file gets restored.* Miraculous as it sounds, in many cases that's all there is to it!

How can a deleted file get unerased?

Simple. The file isn't really deleted in the first place. When you delete a file, all that actually gets erased is part of the file's directory entry. (That's why it only takes an instant to delete an entire file.) Without a directory entry, DOS can't find the file, but THE NORTON UTILITIES can.

Now, what about those cases where you can't possibly recover a file because you've already partially overwritten it with other files? Surely THE NORTON UTILITIES can't help you then?

Wrong—they can! THE NORTON UTILITIES won't recover the entire file, of course, but they *can* help you restore the portions of the file that still remain on the disk.

It's done with a powerful utility called **nu** that lets you display, change, and capture to a file any information on any disk. In complex cases you may need to do some detective work, but **nu** will help you find whatever remains on the disk, thereby saving you from countless hours of retyping lost data.

In my opinion, *the ability to recover lost files alone makes THE NORTON UTILITIES well worth the price.* But there's even more to the pachage: THE NORTON UTILITIES are also an excellent *disk management system*. Here are some examples of what you can do:

RECOMMENDED FOR:	
HP110 Portable	●
Portable Plus	●
Portable Vectra	●
HP150	●
IBM PC and compat.	●

Let's say you want to sort directories and files physically on disk—either by name, extension, size, date, time, or by any combination of these. Just use the **ds** (disk sort) command. I use this one to sort my electronic disk files by size all the time. Then when I display the directory, the larger files come at the end of the list, and I can see at a glance which ones to move elsewhere to free up any needed amount of disk space.

Or let's say you remember putting the phrase "a penny saved is a penny earned" into a text file on your electronic, floppy, or hard disk but you can't remember which file it was—or even which directory. How to find it? *No problem.* Just type **ts** (for text search), specify the phrase, and the program will display every occurrence of the phrase, identifying each occurrence by directory and file.

Or let's say you can't remember which subdirectory you put a given file into. Instead of hunting for the file manually, just type **ff** (find file) and specify the name of the file and the directories to search through. The program does the rest.

Other useful features include the **fa** command, which lets you change file attributes (for example, to make erasable files unerasable or vice-versa), and the **fs** command, which tells you the total file size of a group of files (I often use it to find out the total disk space occupied by my Lotus worksheet ".WKS" files or by all my text files from a given project).

"Indispensible."
PC Magazine

"Don't compute without it."
The New York Times

"You'll bless this disk."
Peter McWilliams
(The Personal Computer Book)

Personalized Software is authorized to distribute THE NORTON UTILITIES on 3½" disk customized for users of the HP110 Portable, Portable Plus, and HP150.

Because of their great helpfulness and ease of use, THE NORTON UTILITIES are already a best-seller in the IBM PC market. Personalized Software is authorized to distribute them on 3 1/2" disk for users of the HP110 Portable, Portable Plus, and HP150. (All it takes is a few keystrokes to customize THE NORTON UTILITIES to your machine; just follow the simple customization instructions included on the disk.) Also included in our package are the standard 5 1/4" disk sold by Peter Norton for IBM PCs.

We recommend Version 4.0 for HP110 users and HP150 users. We recommend the Advanced Edition of THE NORTON UTILITIES for users who might need to retrieve blocks of text from disks that have become "corrupted" (unreadable by DOS).

THE NORTON UTILITIES are a time-saver for you and a life-saver for your data. Use them just once and you'll wonder how you ever did without them. Order your copy at no risk today.

THE NORTON UTILITIES
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DISK MANAGEMENT

THE NORTON UTILITIES 4.0 . . . . . $99.95
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P.O. Box 869, Fairfield, IA 52556 515/472-6330

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Charge your Portable (HP110, Plus, or Portable Vectra) off your car's cigarette lighter!

It's the Mobile Ni-CaD Recharger (MNR-2) from S.O.S., and it couldn't be easier to use: simply plug one end into your car's cigarette lighter and the other into your Portable, Portable Plus, Portable Vectra, HP9114, or ThinkJet.

The time it takes to charge a given unit is about 30% longer than with a wall charger. Your car does not have to be running—the unit can operate overnight with no danger of running down a normal car battery.

Mobile Recharger for Portable, Portable Plus, HP9114, and ThinkJet $39.95
Portable Paper subscriber price.....$36.95

Mobile Recharger for P. Vectra $69.95*
Portable Paper subscriber price.....$59.95

*Higher price for Portable Vectra version is due to 1% precision input that the Portable Vectra requires for charging.

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I have been pleased with both the GoldStar monochrome and the EGA monitors. I now use the monochrome monitor at home and the EGA at work.

Each type of monitor has its limitations. The monochrome monitor suffers from some of the same shortcomings as a standard LCD screen, but not as severely. Software that analyzes Portable Vectra hardware thinks that it is connected to a high resolution, color (EGA) monitor. Consequently, some of the characters are awkwardly formed and some of the contrasts on the screen are a bit odd, but still certainly readable. Even with these problems, the monochrome monitor is much more readable than the Portable Vectra display.

The CGA monitor is a color monitor, but without the resolution of an EGA monitor. Text is not nearly as clear on a CGA monitor as it is on a monochrome or EGA. Consequently, I do not recommend the CGA.

The GoldStar EGA monitor is good for both text processing and colors. It includes a feature (not available on its HP equivalent) which lets you switch between EGA color mode and amber monochrome text mode. If you are in a word processor, the EGA monitor normally displays white letters on a black background. The GoldStar EGA monitor has a button (in the front) which enables you to switch to a monochrome amber display. An amber display is much easier on the eyes than a white-on-black display.

I discovered one interesting anomaly. If you are using either a monochrome or color monitor, the HP **setup** command will not let you adjust the palette. However, if you use the monochrome monitor or the EGA monitor in text mode, the default **setup** palette governs what you see on your monitor. Consequently, my "quick and dirty" solution of making all the colors black yielded the same results as described above. Menus in programs such as SideKick could not be seen, given the contrast of colors. Once I put the LCD screen back on, ran **setup**, and activated the default palette, the contrast problem went away.

See the last section of Vectra Views for pricing information on the GoldStar and HP monitors.

Getting Organized

Since one of the themes of this issue is "getting organized," I'll report how I am starting to organize my Portable Vectra dual floppy system. Hard disk users should also find the ideas relevant. (See the end of this article for a complete list of the products mentioned in this section.)

GETTING STARTED

One of the nicest features of the Portable Vectra is that you can put 1.44 Megabytes of programs and data on your 3 1/2 inch floppy disk. The first thing I did was format a box of floppies and put the operating system on each disk. I put the operating system on by issuing the DOS command **format b:/s**. I kept a backup of my master DOS disk in the A drive when I issued the command. (I am used to DOS, and like Tom Page, am not a fan of PAM. However, I do suggest that novices and PAM fans follow instructions in the startup manual and also install PAM on each disk.)

After I put an operating system on a disk, I was left with 1,338K for data. For me it is worth giving up 100K to know that I can always boot up (start the Portable Vectra) from any disk I use.

CREATING A UTILITIES DISK

The next thing I did was create a utilities disk. My intention is to always have this disk available and normally boot off that disk. (To boot off a disk means to put it in the A drive and turn on the computer. Hard disk users can boot off the C or hard disk unless a disk is present in the A drive.)

On the utilities disk I keep all my favorite utilities that I want available all the time. In particular, I created a subdirectory structure and divided my files into appropriate subdirectories. (If you do not know about subdirectories, check out your DOS manual or any book on DOS at your local bookstore. We will be running a Foundations column on subdirectories in a future issue of *The Portable Paper*.)

MEMORY-RESIDENT PROGRAMS

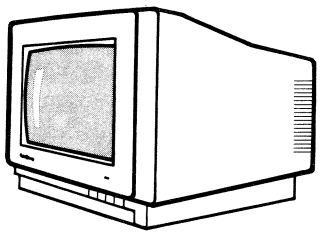
On this utilities disk I have my favorite memory-resident utilities, SideKick, SuperKey, and Ready. A memory-resident program is a program that can be popped up at any time, even while you are running another program.

With SideKick installed in the middle of whatever I am doing I can hold down the two Shift keys, and I have immediate access to a calculator, notepad, phone dialer, or a calender.

I have on order the current version of SuperKey. I tried an old version, and it did not function properly on the Portable Vectra. I was told by a contact at HP Corvallis that the current version of SuperKey works fine on the Portable Vectra.

SuperKey is a keyboard macro generator. Unless you are used to such an animal, it takes a little time to learn. However, the effort is well worth it. A keyboard macro generator allows you to assign a series of keystrokes to one keystroke. On another desktop I create all my WordPerfect and Lotus macros in SuperKey even though those programs support macros. Having one program to create macros saves disk space and means that there is only one macro user interface to master. Examples of my simple Lotus macros include: change column width—**Alt w**, and type **@sum()**—**Alt s**. One of my WordPerfect macros, **Alt l**, creates a form for a letter (with current date and so forth). A second macro, **Alt e**, extracts the header of that letter to address an envelope for my LaserJet.

Best buys in monochrome and high resolution EGA color monitors for the Portable Vectra



The Portable Vectra isn't just a great portable computer. It's also a great desktop computer.

The no-compromises keyboard, large disk capacity, small footprint, and fast processor allow it to hold its own against many desktops on the market. All that's needed is a full-size CRT monitor.

The ones we like are by GoldStar. They give excellent quality for the price, and it takes just seconds to install one in place of your Vectra's LCD screen. (It's equally easy to replace the LCD screen when you're ready to travel.)

GoldStar's monochrome monitor is a huge step up from the Portable Vectra's LCD display. (As with any monochrome monitor connected to a machine with a color graphics card, certain software packages will occasionally create less-than-ideal characters and contrasts.) The high-resolution EGA color monitor has a feature not available on most color monitors: a button that lets you switch between full color and eye-saving amber monochrome.

To make your Portable Vectra double as a true desktop computer, order one of these affordable GoldStar monitors today. You might even want two—one for home and one for your office.

GoldStar monochrome monitor .....$129..
Portable Paper Subscriber Price .....$119..
GoldStar high-resolution EGA color monitor .....$649.
Portable Paper Subscriber Price .....$495.

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HP110 Portable	
Portable Plus	
Portable Vectra	●
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Perhaps my favorite memory-resident program for use on the Portable Vectra is Ready. With Ready I create various outlines that I can pop up at any time. For example, I always have a "next Portable Paper" outline. No matter what I am working on, if I have an idea for, say, the Vectra Views section of the next *Paper*, up pops the *Portable Paper* outline. I make an entry in the Vectra Views subhead and am back to what I was working on before, with one keystroke.

MY EVERY DAY UTILITIES

The heart of my utilities disk is the subdirectory I named **utils**. Here is an annotated listing of the files currently in my **utils** subdirectory.

Directory of A:\UTILS

FILENAME	EXT.	BYTES	PUBLISHER	DESCRIPTION
ds	**exe**	25638	Norton	Directory Sort
fa	**exe**	7296	Norton	File Attributes
ff	**exe**	7924	Norton	File Find
fs	**exe**	8536	Norton	File Size
qu	**exe**	14554	Norton	Quick Unerase
ts	**exe**	17276	Norton	Text Search
print	**com**	8963	DOS	print spooler
xcopy	**exe**	5402	DOS	copy subdirectories
chkdsk	**com**	9819	DOS	check directory integrity
diskcopy	**com**	5211	DOS	copy exact disk image
format	**com**	11629	DOS	format program
forl50	**exe**	11314	HP	formats HP 3 1/2" disk format
mode	**com**	14739	DOS	defines serial printer info
more	**com**	282	DOS	types screen at time utility
vdisk	**sys**	2831	DOS	Electronic disk
qd2	**exe**	74752	Gazelle Systems	disk organizer
setup	**com**	42240	HP	palette, monitor control
dlink	**com**	37878	Micro-Z	file transfer Direc-Link
ed	**exe**	39608	Personalized Software	editor

The first six programs come from The Norton Utilities. (They are all included in both the regular and the Advanced Edition. See Vol. 1, No. 2, p. 16, or the Norton ad in this issue for more information.) **ds** lets me sort a disk directory by date, size, name, extension, or in any arbitrary order. As discussed in this issue's Wizardry column, **fa** lets me examine and change the attributes of a file. For example, I can use **fa** to make my basic memo form a **read-only** file. That way I cannot inadvertently change or destroy the file.

ff lets me find a file no matter on what disk or subdirectory I have lost it. **fs** gives me the exact number of bytes that a file or group of files occupies. (The PAM File Manager and DOS **dir** underestimates the amount of storage a file actually takes up on a disk.) **qu** lets me unerase in seconds any file I have accidentally deleted. With **ts** I can search a group of files for a phrase. This is handy when I remember some of the specific contents of a file but have forgotten its name.

The next group are standard DOS utilities that come on the Vectra DOS disk. **print** lets you print an ASCII file from DOS while you continue your work. **xcopy** lets you copy the entire subdirectory structure from one disk to another. **chkdsk** allows you to make sure a directory has not become corrupted and sometimes lets you fix the problem if there is one. **diskcopy** copies by bit rather than by file data from one disk to another. With **format** you format 1.44 Megabyte 3 1/2 inch floppy disks. The **forl50** program formats 3 1/2 inch floppies for 700K of file space in HP format so that the Portable Vectra and the HP110, HP150, and Portable Plus can read the same disk.

The **mode** command tells the Portable Vectra the information it needs in order to use a serial printer. See page 20 of the last issue (Vol. 3, No. 1) for a discussion of how to use **more** in order to see one screen at a time when using the DOS **type** command. The final DOS command, **vdisk.sys**, lets you create a temporary electronic disk. We will discuss this in a future issue.

qd2 is a disk organizer (with the trade name QDOS) from Gazelle systems. I use QDOS when I want to see a graphic listing of my subdirectory structure, and when I want to move, delete, copy, or rename groups of files.

PAM's File Manager offers these capabilities but in a much more primitive way than QDOS, a dedicated disk organizing product. I find the program easy to use—very intuitive. You don't even need to read the manual.

setup is HP's program to configure the Portable Vectra. Configuration information is stored in non-volatile RAM and remains when the Portable Vectra is turned off. With the setup program you can define the palette (as described above), set the date and time, set an alarm, cause the program to stay resident, and (for non-US users) load different screen fonts.

dlink is the Direc-Link program reviewed later in this column. It allows Portable Vectra users to transfer files from the Vectra to a desktop IBM compatible computer via the parallel or serial port.

Finally, **ed** is Personalized Software's The Editor program. The Editor is a powerful, fast, compact ASCII editor that runs on the HP110, Portable Plus, HP150, Portable Vectra, and IBM compatibles. It is great for memos, letters, text to be sent across phone lines, and any simple word processing task. For printer-intensive tasks a full-featured word processor is more appropriate.

APPLICATION DISKS

Each of my other disks is dedicated to a particular application. For example, I have a WordPerfect disk. In subdirectory **wp** I put all the files necessary to run WordPerfect. In subdirectory **ppl4** I have all the files for this, our fourteenth issue of *The Portable Paper*. I have a **ppfut** subdirectory for articles for future issues, and a **dwp** subdirectory for other WordPerfect files (**d** stands for data.) As my needs grow, I will probably create new subdirectories. Even with 900K of WordPerfect program files, I still have over 400K for WordPerfect documents, sufficient for current work.

For spreadsheets I have Borland's Quattro on order. I have seen a demonstration, and for what I need, I think Quattro will give me all of the capability of Lotus 2.01 (including a similar menu structure), for less than half the price of Lotus. I'll report more on my experience with Quattro in future issues. As soon as I get the program, I'll create a Quattro disk with a **\quattro** subdirectory for the Quattro program and a **dquattro** subdirectory for my Quattro spreadsheets.

THE AUTOEXEC.BAT FILE

When a Portable Vectra system boots up, one of the first things it does is look for a file named **autoexec.bat**. If it finds the file, it starts executing every DOS command in that file. At the moment my **autoexec.bat** file on my utilities disk looks like this:

```
path a:\utils;b:\wp;b:\quattro;
prompt $t$h$h$h$h$h $d $p $g
rem cd \key
rem key generic /ml
cd \ready
ready
cd \sk
sk
cd \
```

The first command in the **autoexec.bat** file is **path**. This command tells DOS where to look for programs to run. In this case I tell DOS to look for my **\utils** subdirectory on my A drive, and for the WordPerfect or Quattro subdirectories on the B drive. If my WordPerfect disk is in the B drive, I can type **wp** from my **A>** prompt. First, the system looks to the main directory on the A drive for the **wp** program file to execute. It then follows the path, and looks to the **a:\utils** subdirectory before finding the **b:\wp** subdirectory where it can execute the **wp** WordPerfect file.

The rest of the **autoexec.bat** file installs the memory-resident programs described above. Since I do not yet have a working copy of SuperKey, I have put **rem**ark in front of the SuperKey commands. As soon as I install SuperKey, I will remove the **rem** portion of the command.

I look forward to hearing from any and all Vectra users about your favorite utilities and programs, and how you organize PAM or DOS.

Best File Transfer Product For Portable Vectra: Direc-Link

The January 12, 1988 issue of PC Magazine ran a review of nine products designed to transfer files from an IBM-compatible portable with 3 1/2 inch drives to an IBM-compatible desktop computer with 5¼ inch drives. We studied those reviews and talked to various manufacturers and tried some of the products. Based on our research we recommend Direc-Link by Micro-Z for the Portable Vectra.

The program itself is powerful, flexible, and easy to use. Many of the nine programs reviewed boast similar strengths. The feature that gave Direc-Link the competitive edge in the Portable Vectra environment is its ability to use both the parallel and serial ports for file transfer.

Most of the programs allow the user to transfer by connecting the serial ports of the two computers with a serial cable. With Direc-Link the two computers can be connected serially or via cables connecting the parallel ports. Since all Portable Vectras have a built-in parallel port, Portable Vectra owners will be able to use Direc-Link. Further, those Portable Vectra users with the optional dual serial port adapter can choose to use either the parallel or serial port for data transfer. This flexibility is useful, because quite often a desktop computer has the serial or parallel port free or more accessible than the other port.

The Direc-Link program is easy to use. I have yet to read the manual. The extremely easy visual tree structure and help screens were all I needed after I loaded and ran the main **dlink.exe** program in both computers.

Some time soon, I intend to look through the brief manual and learn how to create "script files." Script files let the user send the same series of files from one computer to the other automatically. These scripts can create messages, and you can run these scripts from DOS batch files. That means you can automate your file transfer procedure for computer novices who can do the labor of file transfer for you.

Micro-Z, the publisher of Direc-Link, was the first company to create a graphic tree diagram as the heart of a commercial package for copying, moving, deleting, and re-naming files on hard disks. (The current version, Direc-Tree Plus, retails for $49.95, $46.95 for subscribers.) Direc-Tree and Direc-Link employ a similar user interface for transferring files between two computers. With a keystroke or two you can tag any file or group of files you want transferred.

T/Master—it may be the only program you'll ever need.

And it may be the most "comfortable" program you've ever used!

It may sound strange to call a computer program "comfortable", but that's the best way we've found to describe T/Master. And the other part is true also: T/Master may be the only program you'll ever need.

That's because T/Master has within it virtually every business application you can think of, including word processor, spelling checker, file manager, spreadsheet, database manager, numerical scratchpad, graph making, data communications, desktop publishing, and even more.

There are, of course, other "integrated" programs on the market that combine a number of applications in one. T/Master, however, is the only integrated program that runs on an HP Portable. In terms of capabilities, T/Master also happens to be one of the best. But that isn't what makes it so special.

You see, T/Master isn't just a very good program. It is an entirely *unique* program. It's one you simply must get your hands on before you can appreciate its incredible richness and elegance—and the sheer thoughtfulness that went into its creation.

THE HEART OF THE SYSTEM

As with most integrated programs, T/Master lets you share data between applications—for example, you can insert a spreadsheet into a report you're typing, or can take information from a database and move it into a spreadsheet—all without leaving the program.

However, with most other integrated programs, you have to exit the module you're in (e.g., word processor), load another module (e.g., spreadsheet), work in the second module, then "import" the result back into the first module. In addition, each module presents you with different commands, a different environment, and often a different "feel".

Not so with T/Master.

T/Master doesn't have modules in the usual sense. Instead, *almost everything is done using the word processor*; it's the heart of the system. T/Master's different functions (spreadsheet, database, etc.) are, in effect, *aspects* of the word processor that have special powers. Instead of leaving the word processor to create a spreadsheet that you then have to import, you simply create a spreadsheet (with all the computational power you need) right where you are.

Same for a database. Using virtually the same commands as for typing ordinary text, you can set up the structure of the database, enter data, sort, search, generate a report, and insert that report into your document.

And that's why T/Master is so *comfortable*. You always interact with it in the *same* mode, which is basically just to type. And what you type is ordinary text, or numbers, or simple English-like instructions. With T/Master, you're always on familiar territory.

SPECIAL FEATURES

Here are just a few of T/Master's most special features:

The **word processor** includes over 100 different functions. You activate these either from menus or by means of simple typed commands. On-line help is available at all times. *Highly suitable for desktop publishing*, T/Master's word processor handles text in columns, and lets you view reduced-size layouts of entire pages.

The **spreadsheet** is different from any other. With most spreadsheets, the columns are of a fixed, predetermined width, and the formulas for calculating each "cell" can only be viewed one cell at a time.

With T/Master, *you* specify the column widths and locations, and you type the formulas at the edges of the spreadsheet where you can see them at all times. (Very helpful in getting your spreadsheets to work!)

"No other application that I know of matches the power, thoroughness, and simple elegance of T/Master."

-David Hughes, Contributing Editor, The Portable Paper

Also, unlike other spreadsheets, you can imbed explanatory text anywhere you like—another benefit of T/Master's text-oriented approach to program integration.

T/Master's relational **database manager** competes with database-only products like dBase III. It's easy to select and combine data from two or more files, set up cross-tabulations from data on disk, and generate ad hoc reports.

T/Master's **data communications** capabilities include many you would expect to find in sophisticated stand-alone communications programs. Yet they're easy to use even if you've never done data communications before. (Note: our version of T/Master has its data communications portion customized to the Portable Plus.)

T/Master includes a **"DO" command** that lets you string other commands together and execute them sequentially (in "batch" mode) without intervention.

It is surprisingly simple, for example, to set up a DO command that will perform the following functions at the end of every month: Compile data from selected databases, construct a bar graph, insert the bar graph into a monthly report, and address copies of the report to a selected list of recipients.

When you realize that you can orchestrate all this by means of a single DO command *entirely automatically*, you begin to see the incredible productivity and power that T/Master offers. At only $295 for the entire package (or even less if you're a Portable Paper subscriber), T/Master is easily the best software value available.

HOW COME I HAVEN'T HEARD OF IT?

The T/Maker Company, developer of T/Master, chooses to remain small. They do not advertise, but prefer to let T/Master be known by word of mouth. This has worked well because of the high level of user satisfaction: According to a recent survey, 12 out of every 13 T/Master users "highly prefer" the program over other integrated packages they're familiar with.

T/Master is widely distributed in Europe and the Far East, where it is bundled with IBM PC compatible computer systems.

NOT FOR EVERYONE

T/Master is not for everyone. The T/Maker Company has told us that their most satisfied users are computer-oriented people for whom increased productivity is important (as opposed to casual computer users who might not appreciate the time and effort T/Master can save them, let alone its elegance).

If your computer is an important part of your work life, and if you're willing to learn a new—and much easier—way of functioning, then we urge you to try T/Master for yourself. If, within 60 days, you feel T/Master is not for you, simply return it for a full refund.

But remember, T/Master must be *experienced*. It has a unique way of doing things and a "feel" that's all its own. Order T/Master today. It may change the way you use your computer.

T/Master
(For Portable Plus, Portable Vectra, HP150).....$295.00
$279.95 for Portable Paper subscribers

T/Maker
(HP110 Portable).....$295.00
$199.95 for Portable Paper subscribers

PORTABLE PLUS USERS
You'll need 296K of main memory to run T/Master, plus 135K Edisc space for the core system, plus the following amounts for storage of the various parts: word processor: 53K; speller: 151K; database and spreadsheet: 135K; data communications: 35K; chart making: 52K; misc. utilities: 60K. You can, if you wish, run the various parts of T/Master off your external disk drive.

HP110 USERS
T/Maker, an earlier version of T/Master, runs on the HP110 Portable with an external disk drive. The program runs beautifully. T/Maker doesn't support data communications, but it does include word processor, spelling checker, database, spreadsheet, scratchpad, and simple bar charts. It is easily the most comprehensive program available for the HP110.

RECOMMENDED FOR:	T/Master ↓	T/Maker ↓
HP110 Portable		•
Portable Plus	•	•
Portable Vectra	•	
HP150	•	
IBM PC and compat.	•	

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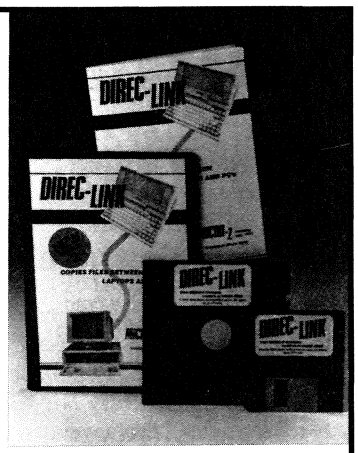
For Portable Vectra users:

DIREC-LINK™

- *Transfers files to and from your desktop computer with just a few simple keystrokes*
- *Works with serial or parallel ports!*



Of all the software on the market that will transfer files between your Portable Vectra and your IBM PC or compatible, our choice is Direc-Link by Micro-Z Company. The reasons are **versatility, ease of use,** and **price.**

Versatility: Direc-Link transfers files via serial *or* parallel ports. So if your desktop's serial port is being used for something else, you can still use the parallel port, and vice-versa. (Note: To use Direc-Link in serial mode, your Portable Vectra must have an HP serial adapter card, available from Hewlett-Packard.)

Ease of use: Direc-Link displays a simple tree diagram of all the files in a directory. You "tag" the files you want to transfer by highlighting them with the cursor. Alternatively, you can use "Script" commands to transfer files *automatically* with both computers completely unattended. In addition, you can display and control both screens from *either* keyboard, and can enter DOS commands without leaving the program.

Price: Even with the added cost of the cables (see box), Direc-Link is *less* expensive than most other file-transfer programs on the market, including many that are serial or parallel only. For easy, versatile file transfer at an excellent price, order Direc-Link at our risk today.

RECOMMENDED FOR:			
HP110 Portable		Portable Vectra	•
Portable Plus		HP150	
IBM PC and compatibles			•

CABLES FOR DIRECT LINK

To use Direc-Link with parallel ports, you'll need a standard *parallel cable* (the kind normally used to connect a computer to a parallel printer) plus a parallel *cable adapter* (enables the standard parallel cable to connect the parallel ports of two computers).

For serial use, we recommend the economical *Direc-Link Cable Pack;* it includes 3 serial cables (covering all combinations of 9-pin and 25-pin connectors) plus a parallel cable adapter.

	Retail price	*Subscriber price*
Direc-Link	**$ 59.95**	**$ 53.95**
Parallel cable	**29.95**	**19.95**
Parallel cable adapter	**20.00**	**18.00**
Direc-Link Cable Pack (3 serial cables plus parallel cable adapter)	**45.00**	**42.00**
Direc-Link Total Package (Direc-Link Software plus 3 serial cables, parallel cable, and parallel cable adapter)	**134.90**	**115.00**

One of the features I liked about Direc-Link was that it allowed me to create and delete subdirectories "on the fly," i.e., from within the program. This way I find I can transfer different kinds of files from the desktop to my formatted floppy and group them on my floppy as I went along.

When you start Direc-Link by typing **dlink**, a display comes up and prompts you to name the drive where you want files to be displayed. You do this with each machine. Direc-Link then tries to connect with the other computer.

Direc-Link keeps trying to connect until it is successful. The two computers are connected when the program is run on both computers and the computers are properly connected by the appropriate serial or parallel cables. When the two computers connect, the screen changes and displays a tree-like directory structure. Move the cursor to the desired subdirectory for sending or receiving files.

At this point, pressing the **f9** key brings up a list of the files in the chosen directory. Move the cursor to a file you want to transfer and press the space key to tag the file. When you are finished tagging files, press the **Enter** key and file transmission begins.

There are several other features that make Direc-Link ideal for the Portable Vectra. Since I have my Portable Vectra hooked to a monitor, I decided to try transferring files without a Portable Vectra display. I disconnected the monitor and carried my (12 pound) Portable Vectra keyboard/computer without display to my Compaq DeskPro for data transfer. I have a parallel cable and the Micro-Z parallel cable adapter permanently hooked to my Compaq. All I have to do is insert the computer end of the printer cable into my Vectra. (I just connect it without screwing on the cable—maybe not a great idea, but it saves time and hassle.)

On my Compaq I start Direc-Link by typing **dlink** and when prompted for a disk drive type **c** for the C drive hard disk. Up pops the screen telling me the computers are not yet connected.

In my A drive on my dual floppy Portable Vectra, I have my trusty utilities disk, described above. In the B drive I have the disk I want involved in the file transfer. I type **dlink** and wait for the green disk drive A light to go off, telling me the program is loaded. Then I type **b** for B drive and go back to my Compaq.

Voila, the Compaq screen changes and a tree diagram of subdirectories on the C disk appears, awaiting my file transfer instructions. If I want to see the file structure or create or remove subdirectories on my Vectra disk, all I have to do is press the ScrollLock key and see both tree structures at once. You can move easily between one tree or the other. Directories on either computer can be sorted by name, size, extension, or date of creation. Tag the files individually by wild card and begin the transfer. You don't need a Portable Vectra display to transfer files either way!

You can purchase the Direc-Link software and cables in a variety of ways. If you want just the software, the cost is $59.50 (*The Portable Paper* subscriber price, $53.95).

The Micro-Z parallel adapter cable costs $20 ($18 to subscribers). To make the parallel connection between the two computers, you simply connect the parallel adapter cable into one computer and a normal printer cable into

the other computer. Then connect the two cables and the connection between the two computers is made.

Micro-Z supplies three serial cables and the parallel adapter for $45 ($42 to subscribers). The main serial cable is 25-pin to 25-pin. There are two short 25-pin to 9-pin adapters. With these three cables, you can connect the Portable Vectra (using either its 25-pin or 9-pin port) to an IBM compatible with either 25-pin or 9-pin port. We sell a standard parallel cable for $19.95 to subscribers ($29.95 retail). If you want the software, the three serial cables, and the two parallel cables, the retail cost is $134.90 and subscriber price is $115.

New Portable Vectra Product: Mobile Recharger

By the end of March the new Portable Vectra Mobile Recharger should be ready for shipping. This product, manufactured by Software Operation Systems, lets you charge your Portable Vectra (like its Portable Plus cousin), off your car's battery via the cigarette lighter. The recharger adheres strictly to recharging specifications as defined by Hewlett Packard.

The time it takes to charge a given unit is about 30% longer than with a wall charger. In most cases, your car does not have to be running—the unit can operate overnight with no danger of running down a normal car battery.

The Portable Vectra mobile recharger is available from Personalized Software. It retails for $69.95 and is available to *The Portable Paper* subscribers for $59.95. You may use the order form in back of the issue or call (515) 472-6330.

Products Discussed In This Article

The following list contains the names, prices, and publishers of the Portable Vectra products mentioned in this article. In most cases you may obtain the products from the manufacturer, a computer dealer, or from Personalized Software. If you are a *The Portable Paper* subscriber, and you decide to order from us, we will be happy to pass along our subscriber discount.

To order from us, call us at (515) 472-6330. You can use the blank spaces on the order form in back of the issue or on a separate piece of paper and send your order to *Personalized Software, PO Box 869, Fairfield, IA 52556.* You may pay by check, credit card, or company purchase order.

PRODUCT	PUBLISHER	PHONE	RETAIL PRICE	SUBSCRIBER PRICE
Direc-Link (software only)	Micro-Z	(213) 377-1640	$ 59.50	53.95
Direc-Link software, (3 ser., 2 par.) cable set			134.90	115.00
Lotus 1-2-3	Lotus	(617) 577-8500	495.00	399.00
Monitor, EGA	Goldstar	(205) 772-8860	649.00	495.00
Monitor, Monochrome	Goldstar	(205) 772-8860	129.00	119.00
Monitor, CGA	Goldstar	(205) 772-8860	449.00	395.00
Norton Utilities	Peter Norton Co.	(213) 453-2361	99.95	79.95*
Norton Util, Adv.	Peter Norton Co.	(213) 453-2361	150.00	119.00*
QDOS	Gazelle Systems	(801) 377-1288	69.95	62.95
Quattro	Borland International	(408) 438-8400	195.00	159.95
Ready	Living VideoText	(415) 964-6300	99.95	89.95
SideKick	Borland International	(408) 438-8400	84.95	69.95
SuperKey	Borland International	(408) 438-8400	99.95	79.95
The Editor	Personalized Software	(515) 472-6330	99.95	79.95
Vectra Mobile Recharger	S.O.S.	(714) 558-1806	69.95	59.95
Vectra DOS	HP/MicroSoft	(800) 538-8787	95.00	85.00
WordPerfect	WordPerfect Corp.	(800) 321-5906	495.00	249.00*

*These prices are only for Portable Vectra versions of these programs. The slightly higher prices for the HP110/ Portable Plus versions are due to the additional disks and instructions we supply to customize these programs (for those machines) or to higher wholesale prices imposed by publishers for special HP Portable versions of their software.

To get the subscriber price order these products from Personalized Software by phone (515) 472-6330 or mail, PO Box 869, Fairfield, IA. You may refer to this Vectra Views column.

SPECIAL FEATURE:

Organizing Your Disks

By Thomas Page

[The author wrote the first half of this article from his perspective as an HP110 user. As he begins the second half of the article, the author has upgraded his system to a Portable Plus that contains more memory. We feel sure that users of all three HP Portables will find the entire piece relevant, because disk organization and budgeting of disk space are critical no matter what computer system you use. Vectra users, think in terms of your 3 1/2" floppy or your hard disk when the terms "Edisc" or "A-Drive" are used -Ed.]

Organizing My 110

A little disk organization will go a long way toward making your computer easier to use. At best, poor organization will result in time lost searching for program and data files. At worst, important files may be lost permanently.

WHERE TO BEGIN ORGANIZING

The first consideration in disk organization for the HP110/Portable Plus is the Edisc. Even with the HP110's internal memory set to the maximum, 12.8K of space is still available on the Edisc (press the PAM **f6** key to configure the 110's memory). This is enough space to store several useful files. Although there is no requirement that any file must be stored on the Edisc, (drive A), most Portable users should find the files listed below useful.

Many of the files in this list are configuration files for the Portable and its built-in software. To minimize disk requirements, two 1-2-3 macros are stored as **.prn** files.

These can easily be imported into a spreadsheet using the File Import Text (**/fit**) command. (See *The Portable Paper* Vol. 1, No. 6, p. 14.) Another file, **let*ZZ*.let**, contains my name and address in a letter header format. If I need to write someone a letter, I start with this file and avoid typing redundant data. **let*ZZ*.let** has a related MemoMaker configuration file, **let71.cnf**. The 71 stands for 71 characters, the number of Expanded-Compressed characters across a ThinkJet page. Using this ThinkJet font makes a letter that is very easy to read.

Here are my files:

pam .alm	Alarm clock file (set with Time Manager)
autoansr.bat	Causes Terminal program to answer telephone
mm .bat	Turns MemoMaker help key into a destructive backspace (see *The Portable Paper*, Vol. 1, Nos. 1 & 3)
autoansr.cmm	Terminal main menu file for auto answer
autoansr.cml	Logon file for **autoansr.cmm**
terminal.cmm	Terminal main menu file
terminal.cm*1*	Terminal download menu file
terminal.cm2	Terminal upload menu file
3 .cnf	1-2-3 default configuration file
cal .com	Perpetual calendar
ff .com	Sends form feed to printer (Vol. 1, No. 4)
lf .com	Sends line feed to printer (Vol. 1, No. 4)
pack .com	Disk organization tool (Vol. 1, No. 2)
pam .env	PAM environment (sets path to include C:\) (Vol. 2,No. 4)
pass .exe	Requires password to start Portable after reboot
let*ZZ* .fmt	MemoMaker format file
startup .fmt	MemoMaker default format file
tememo .fmt	MemoMaker format file
let*ZZ* .let	Letter base for personal letters
tememo .let	Letter base for business letters
pam .mnu	PAM menu file
pam .msg	PAM message file (created by Time Manager)
pmacro .prn	123 printing macro (Vol. 1, No. 5)
tmacro .prn	123 title setting macro
config .sys	Configures DOS

These files need to be kept on the A drive at all times. I store backup copies of most of these files in a subdirectory named **setup** on my main floppy utility disk.

The last entry in the floppy disk **pam.mnu** file should be:

Setup A:
copy c:\setup a:

That way "Setup A:" appears as the last menu box in PAM.

GETTING THE MOST OUT OF THE EDISC

To maximize the size of the Edisc, always use the smallest working memory possible. (For example, the **system config main memory/ Edisc** could be set to 96/176.) The Portable is very fast if the A drive is used and slow as grandma if a program is run from the external disk (drive C). Therefore, I always try to put necessary files (for the programs I want to run) on the Edisc.

This style of operation requires memory re-configuration from time to time as well as the transfer of files between disks to back up the A drive and to move data and programs to the A drive for execution. After the basic stuff is put on the Edisc, applications are installed and removed depending on the work being done. PAM's file manager **f2**, or The DOS **dir**ectory and **copy** commands are always available to transfer files. However, there are other techniques that use batch files, HP's install and remove utilities, and other readily-available disk maintenance utilities that can facilitate transferring data between disks. We will discuss some of these techniques as we move along.

PRESERVING PRECIOUS DISK SPACE

Whenever something is done on the Portable, compromises are necessary. When in doubt, I compromise toward more Edisc. One of the techniques I use to preserve disk space (that is applicable to floppy disks as well as the Edisc) is to write a large batch file that uses replaceable parameters (rather than a series of small batch files) to access applications. (A batch file is a series of DOS commands that executes sequentially in a file. See *The Portable Paper* Vol. 1, No. 2.)

Since disk space is allocated in sectors, a file will always occupy an amount of disk space which is a multiple of the sector size. On the HP110 and Portable Plus, Edisc sectors are 512 bytes. Therefore a large batch file may occupy no more disk space than a small file and may be able to perform a number of functions. Another compromise I make is to sometimes perform a manual rather than an automated procedure. The flexibility (of more Edisc space) that results may offset the cost of a few keystrokes.

USING COLOR CODES TO ORGANIZE DISKETTES

I assign volume labels (disk names) to the floppy disks I use with my Portable. I use color-coded disk labels to assist me in locating each disk. For example., utilities disks are coded red, and less useful utilities I code red/another color. Disks containing important financial data (bank accounts, etc.) I code blue, and backup disks are indicated by color of disk being backed up/orange, so my bank account backups are blue/orange. Games are coded red/blue, CompuServe and Bulletin Board downloads are purple, and so on. I know that my color-coding system is not perfect, but it demonstrates principles that should be practical for most users.

Please bear in mind that organization is always a process—it is not static. My organizational schemes grow and develop and multiply and blend to accommodate my changing needs. When I take an inventory of my disks, I may find that some do not reflect my current state of organization, but to quote Alfred E. Newman, "What, Me worry?" The data is on the disk and I usually know what it is. If I don't know what it is, I can always load the files and take a look.

THE IMPORTANCE OF SUBDIRECTORIES

DOS subdirectories are another good tool for organizing data. Subdirectories provide a method to organize data on a disk just like it was in a filing cabinet. The root directory is the filing cabinet, each drawer is a subdirectory, and file

2400 baud portable modem for your HP Portable

The 4″×2″×1″ WorldPort 2400 costs less than HP's internal modems, is faster, and can be used with more than one computer.

Weighs only 6½ ounces!

If you do data comunications with an HP Portable or Portable Plus, you've probably found the internal 300- or 1200-baud modem to be too slow. Until now, the only solution was to buy a bulky external modem and lug it around wherever you go.

A better solution is the Worldport 2400. It measures a trim 4″×2″×1″, it's rugged, it weighs only 6½ ounces including the battery, and it sends and receives at 300, 1200, and 2400 baud.

A MYRIAD OF FEATURES

The Worldport 2400 has a wealth of features you would expect to find in a desktop modem several times its size.

EXTRA BONUS FOR USERS OF THE IBM PC AND NEW HP PORTABLE VECTRA

Included with the WorldPort 2400 at no charge is the acclaimed communications and remote control software package, Carbon Copy PLUS (retail value: $195). The program also comes free with the WorldPort1200—WorldPort2400 Upgrade Kit. (Carbon Copy PLUS will not run on the HP110 or Portable Plus, but both WorldPort modems will run with HP's communications software, namely the Terminal program for the HP110, and TERM and Reflection for the Portable Plus.)

For example, the WorldPort 2400 has auto-dial, auto-answer, and both pulse and tone operation. It comes with a standard modular phone plug for connecting with the telephone line. It offers nonvolatile storage of up to 20 commands. And it is fully compatible with the industry-standard Hayes AT Command Set, and with the HP110's Terminal software and the Portable Plus's TERM and Reflection software.

Since a modular plug is not always available, the WorldPort 2400 also has a built-in interface for an acoustic coupler. (The coupler, an optional extra, runs at 300 and 1200 baud.) The unit is compatible with both the internationally accepted CCITT communications standards and the Bell communications standards recognized in the U.S..

The WorldPort 2400 uses a standard 9-volt transistor radio battery (it's included with the unit). A fresh battery will keep the WorldPort humming for 8-10 hours. You can extend battery life by operating the unit from a wall outlet whenever possible, using the optional AC adapter. The WorldPort 2400 draws no power from your Portable's battery.

DOUBLE GUARANTEE

In addition to our standard 60-day money-back guarantee, the WorldPort 2400 comes with a 2-year manufacturer's warranty covering defects in materials and workmanship.

The WorldPort 2400 offers portablility, reliability, well-designed features, and ease of use. Order yours, risk-free, today.

	Retail Price	Subscriber Price
WorldPort 2400 modem (with Carbon Copy PLUS software)	$359.00	$319.00
WorldPort 1200 modem (without software)	199.00	179.00
Cable to connect modem to HP Portables	30.00	20.00
Acoustic coupler (300/1200 baud)	59.95	56.95
9-volt AC adapter	6.95	6.95
Upgrade kit: WorldPort1200—WorldPort2400 (includes Carbon Copy PLUS software)	199.00	179.00

RECOMMENDED FOR:			
HP110 Portable	•	Portable Vectra	•
Portable Plus	•	HP150	•
IBM PC and compatibles			•

60-DAY MONEY BACK GUARANTEE

See order form for details.

TO ORDER

Use postage-paid order form inside back cover or send check or credit card information (#, exp. date, signature) to:
Personalized Software
P.O. Box 869, Fairfield, IA 52556 515 472-6330

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folders represent additional levels of subdirectories. You can put files on top of the cabinet (that is, the root directory) and in the front of each drawer and folder.

As I said, my primary utility disk has a subdirectory, **SETUP**, to hold copies of all the files I keep on my Edisc. Lotus Graph files are in a subdirectory named **LOTUS**. An extensive subdirectory system that identifies baud rates and locations holds Terminal configuration menus and logon files. These are necessary because phone numbers change as I move around the country. Using subdirectories allows disks to hold more files—each floppy directory only has slots for 96 files. The volume label occupies one of these slots and each subdirectory occupies a directory slot.

USING DOS COMMANDS FOR TERMINAL FILES

I keep a fairly large batch file on this disk to run communications routines when the external disk is attached. From time to time I use the DOS **copy** command to copy selected configurations to the Edisc, to get its speed advantage. The DOS **copy** and **del**ete commands are the best way to handle transferring (and subsequently removing) terminal menu and logon files to the Edisc. The surgical precision obtained by directly manipulating DOS allows copying only files that will be used for a session. Terminal configuration files multiply like coat hangers in a closet. The Edisc is not big enough for a complete set. I tried a batch file to copy Terminal files to the A drive but found it much more difficult to control than DOS and it was just too slow.

USING WILDCARD SYMBOLS

The standardization of file names and extensions helps with file manipulation. First, it makes files easier to find. Perhaps more important, it allows the use of the MS-DOS wildcard symbols (**?** and *****) to manipulate more than one file at a time. For example, suppose you are using 1-2-3 to prepare weekly and monthly reports. Monthly reports could be named **MRyymmdd.WKS** and weekly reports could be named **WRyymmdd.WKS**. In the file name, yy is the year, mm is the month, and dd is last date of the report period. Further, suppose that letters of transmittal are prepared to accompany and expand on the reports. The same file naming system could be applied to these letters except that the extension might be **.rpt**.

If you receive a request for all monthly report transmittal letters for 1986, these can be copied to another disk with the following series of commands:

md a:\hold	(create temporary subdirectory)
copy c:\MR86*.rpt a:\hold	(copies files from archive disk)
copy a:hold c:	(copies files to transmittal disk)
del a:\hold*.rpt	(deletes files from A drive)
rd a:\hold	(removes temporary subdirectory)

Add Megabytes of RAM–and ROM–inside your Portable Plus!

Leave that bulky disk drive in your closet! Now your 9-pound Portable Plus is all you'll ever need to run your programs and access your files!

With the advent of the Portable Plus, Hewlett-Packard solved almost every problem of computer portability. The machine is rugged, weighs only 9 pounds, stores software on ROM chips, and has non-volatile memory.

But as every user knows, the Plus has one major drawback: limited memory space. Until now, if you needed even a modest amount of space for data files and application programs, you were forced to carry an external disk drive wherever you went.

Now all that is changed. Because now you can boost your Portable Plus's memory by as much as 4 *megabytes*. How? Simply by installing special 1- or 2-megabyte RAM cards in the bottom of your Portable Plus.

MEGABYTES PER CARD

The RAM cards have been developed by SoftWord, of Surrey, England. As SoftWord's exclusive U.S. distributor, Personalized Software is currently offering two kinds of cards:

- **2 Megabyte RAM Cards**
- **1 Megabyte RAM/ROM Cards** containing 1 megabyte of RAM and 8 sockets for ROM chips. Each ROM socket can hold up to 128K of data or software on ROM.

"A" DRIVE AND "C" DRIVE

Each kind of SoftWord card comes in two different varieties: "A-drive" and "C-drive." The difference lies in how the RAM memory on the card is used in your system:

RAM that's on an *A-drive Card* becomes part of your Portable Plus's main—Edisk memory (the internal memory you partition using the P.A.M. System config menu). RAM that's on a *C-drive Card* doesn't affect your Plus's main/Edisk memory; instead it functions as electronic disk storage, just as though it were an external disk drive. (Usually it will be the C drive, but if you have an HP9114 plugged into your system, the memory card becomes the D drive.)

EASY TO INSTALL AND USE

At the bottom of your Portable Plus, there are two compartments designed to hold HP's RAM and ROM expansion drawers. Any of the SoftWord cards can be installed in either of these two compartments. All you do is remove whatever drawer may be in there and replace with a SoftWord card.

Note: We will accept your old RAM or ROM drawer and any extra memory as a trade-in towards purchase. Please call for current trade-in prices.

Once installed, the extra RAM on the SoftWord cards works exactly like ordinary Portable Plus memory, only there's lots more of it.

HOW TO CHOOSE

The examples in the box at the far right will help you examine your options. (For most users, the ideal configuration will either be the one in Example 2 or Example 4.)

'Note: If you only purchase *one* SoftWord card, we recommend you get the C-drive variety rather than the A-drive variety. There are three reasons for this:

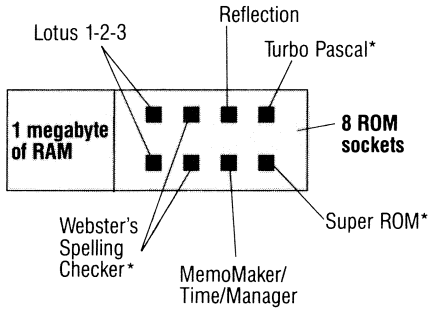
1. If you reset your Portable Plus using the Battery Reset button, you will lose whatever is in the A-drive memory, but what's in the C-drive memory will be retained.
2. A C-drive Card allows you to utilize whatever extra RAM drawer memory you may already be using for your A drive (see Example 1); by contrast, a 2 Megabyte RAM A-drive Card must be used *in place* of an existing RAM drawer.
3. With a C-drive Card in your system, you have, in effect, two built-in disk drives—the A drive, and the C drive that's on the card. By storing copies of critical data and programs on *both* drives, you protect yourself against disaster if your A drive becomes corrupted (which, as you may know, can happen).*

WHOLE NEW MACHINE

The minute you install your new SoftWord card(s), your Portable Plus becomes an entirely new machine. You'll be able to run large applications like WordPerfect or RightWriter—or even an entire integrated package like T/Master—and still have plenty of room left over to manipulate large

AN EXAMPLE OF HOW TO USE
a 1 Megabyte RAM/8-Socket ROM Card

There are many ways to utilize the 8 ROM sockets on a 1 Megabyte RAM/ROM card. Here's one combination of programs you might find useful:



*Available from Personalized Software

*There is one potential drawback to using a C-drive Card: You cannot directly back up your C drive to an IBM PC or HP150 that has an HP-IL interface card if the PC or 150 has a hard disk of more than 10 megabytes. (In such cases, you can back up your C drive to an external disk drive or to your A drive, and then copy your files to the PC or 150 from there.)

data files, *all without the need for an external disk drive.*

In addition, you'll enjoy the faster access time that comes with RAM storage, and the convenience of not having to hassle with disks all the time. (You should, of course, continue to use disks to back up your files occasionally as a safety measure. So don't bury your disk drive *too* far back in your closet!)

DOUBLE GUARANTEE

SoftWord's RAM cards are manufactured to extremely high standards by a company in the Netherlands that has more than seven years of experience in designing and fabricating memory expansion devices for Hewlett-Packard hand-helds and portables. Reliability is assured by extensive testing.

All SoftWord cards come with a one-year manufacturer's warranty covering parts and labor. Should a problem develop, simply send the card to us, and we will ship it to and from SoftWord at our expense.

In addition, the cards are covered by our own money-back guarantee: If you are not satisfied with a SoftWord card, you can return it within 60 days for a full refund.

By boosting your Plus's memory into the megabytes, you gain the ultimate flexibility in portable computing. Order one or more SoftWord cards, risk-free, today.

2 Megabyte RAM A-drive Card or C-drive Card . . . . . $3495.
$2995 for Portable Paper subscribers.

1 Megabyte RAM/ROM A-drive Card or C-drive Card . . . . . $2350.
$1995 for Portable Paper subscribers.

IMPORTANT: Be sure to specify "A-drive Card" or "C-drive Card" on the order form.

TO ORDER

Use postage-paid order form inside back cover or send check or credit card information (#, exp. date, signature) to:
Personalized Software
P.O. Box 869, Fairfield, IA 52556 515/472-6330

Non U.S. Customers:

Please order directly from SoftWord. Here is their full product line and price list (prices include shipping and insurance):

384 RAM Card £575

½ Megabyte RAM A-drive Card or C-drive Card . £800
(Upgrade to 1 Megabyte) £500

1 Megabyte RAM A-drive Card or C-drive Card . £1200

2 Megabyte RAM A-drive Card or C-drive Card . £1800

1 Megabyte RAM/ROM A-drive Card or C-drive Card £1200

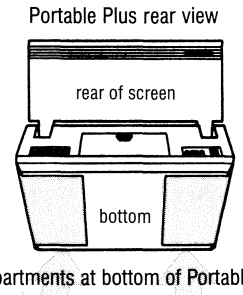
UK residents please add Value Added Tax at the applicable rate.

SoftWord, Astage, Rectory Lane, Windlesham, Surrey, GU20 6BW, England. Telephone: National: Bagshot (0276) 75440. International: +44276 75440

Adding Megabytes With Memory Expansion Cards

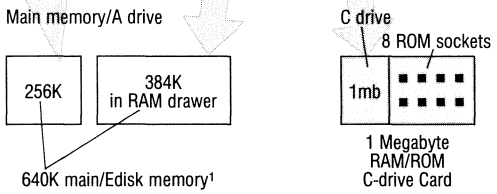
Here are some ways you can use SoftWord's A-drive Cards and C-drive Cards to expand the capacity of your Portable Plus:

(Note: 1 megabyte =1024K)



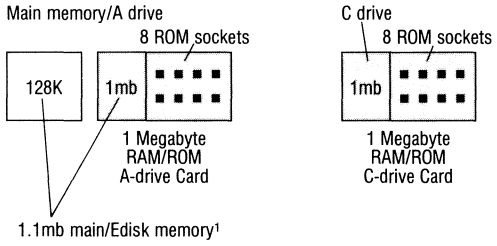
EXAMPLE 1: **1.64 megabytes**

1 Megabyte RAM/ROM C-drive Card installed in a Portable Plus having 256K of built-in memory and 384K of extra memory purchased from HP.
Gives you: 640K of main/Edisk memory, 8 ROM sockets, and an additional 1mb of C-drive storage.



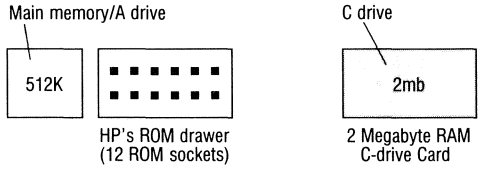
EXAMPLE 2: **2.1 megabytes**

1 Megabyte RAM/ROM A-drive Card and **1 Megabyte RAM/ROM C-drive Card** installed in a Portable Plus having 128K of built-in memory. (Recommended for users who may need more than 8 sockets filled with software on ROM.)
Gives you: 1.1mb of main/Edisk memory, 16 ROM sockets, and an additional 1mb of C-drive storage.



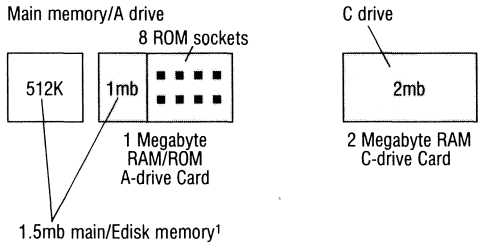
EXAMPLE 3: **2.5 megabytes**

2 Megabyte RAM C-drive Card installed in a Portable Plus having 512K of built-in memory and HP's ROM drawer.
Gives you: 512K of main/Edisk memory, 12 ROM sockets, and 2mb of C-drive memory.



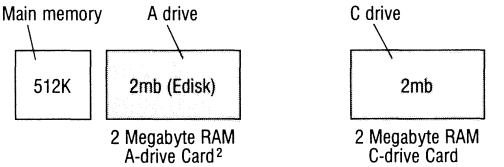
EXAMPLE 4: **3.5 megabytes**

1 Megabyte RAM/ROM A-drive Card and **2 Megabyte RAM C-drive Card** installed in a Portable Plus having 512K of built-in memory.
Gives you: 1.5mb of main/Edisk memory, 8 ROM sockets, and an additional 2mb of electronic disk storage.



EXAMPLE 5: **4.5 megabytes**

2 Megabyte RAM A-drive Card[3] and **2 Megabyte RAM C-drive Card** installed in a Portable Plus having 512K of built-in memory.
Gives you: 512K of main memory and an additional 4mb of storage. (No ROM sockets are available in this configuration.)



[1] Can be partitioned in any ratio in normal manner, with maximum main memory of 512K.

[2] A 2 megabyte RAM A-drive Card will only work in a Portable Plus having 512K of built-in memory. In the Portable Plus, 2.5mb of main/Edisk memory can only be partitioned as 512K main memory, 2mb Edisk.

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If all the report files (**.rpt** and **.wks**) for a particular month (e.g., June) of every year are needed, this series of commands could be used:

copy c:\MR??06??.* a:	(copies selected files to A drive)
copy a:\MR??06??.* c:	(copies selected files to C drive)
del a:\MR??06??.*	(deletes selected files from A drive)

For those times when you may not have the courage to use a wildcard to delete a large number of obsolete files from the Edisc, try the following to prove the command before you execute it. In this example it is assumed that a series of files with the first four characters, **proj**, has been created.

dir proj*.*

If the above command turns up no keepers then:

del[f3] (use f3 key to automatically repeat arguments of command)

Or if you wish to transfer files to the C drive before deleting them then use this series of commands. Spacing is a bit critical so minimum spacing is indicated by [Space].

dir[Space][Space]proj*.*
copy[f3][Space]c:
del[Space][f3]

Since the **del**ete command does not recognize a second argument, don't worry about **c:** appearing in the third command.

And if you should need to know how much space is left on a disk but don't want to wait for a long directory to scroll by, **dir**ectory only one easy file. For example:

dir /ff.*

Since I always have **ff.com** on the root directory of the A drive, the above command gets me disk-free space with minimum key strokes even if I should be in a subdirectory. It is almost as good as the utility **free.com**, which uses valuable disk space.

Organizing The Portable Plus

I recently performed a memory upgrade on my HP110 in the only way that made sense to me. I replaced it with a used 512K + 1 Meg Portable Plus from Personalized Software. Compared to the 172K maximum Edisc of my old portable, this 1 Meg Edisc seems almost unlimited. Granted, as compared to the 30 Meg hard disks found on some machines today 1 Meg is not a lot of memory. But compare the boxes these machines are in. Given the choice, I would much rather drive a Ferrari than a VW van or a Mack truck.

ORGANIZATION IS REQUIRED!

One of the Portable's best characteristics is that it requires its user to be somewhat organized. How may owners of 30 Meg disks have their directories, subdirectories, and files neatly arranged? If I owned a 30 Meg disk, I would probably have 42,738 files scattered through 2379 directories. Actually, maybe that is not true. Taking care of my 110's little disk taught me techniques that help me to manage large disks also.

When I upgraded from the 110 to the Portable Plus, some rearrangement of floppy disks was necessary. My old master utility (floppy) disk became useless because most of the utilities on it are now on ROM and my old Terminal configuration files are useless with Reflection. I also upgraded to 1-2-3 Release 2.01, rendering the old PrintGraph obsolete.

ADVANTAGES OF HAVING MORE WORKING MEMORY

With my 110 I always tried to operate with the smallest useable working memory. I have set my Plus for the maximum—512K. One nice feature of this much memory is that it allows me to dash out the back door of one program and execute another. These "back doors" are in 1-2-3 (Release 2.01): **/s**, in Personalized Software's The Editor: **[esc] f c**, and in Reflection, **shell**. 512K of memory also makes it possible to keep resident some useful utilities. Most importantly, there is Personalized Software's Shelp, which always makes available a notepad, a calculator, a keyboard macro generator, and system off.

Primarily, I use Lotus 1-2-3. The Portable Plus' larger screen allows me to keep Time Manager almost instantly available, although I rather resent having to drag along MemoMaker to get TM. The Editor is my choice for all editing and word processing chores. I use it on the IBM-compatible office-bound and luggable machines that I use from time to time as well as on my Portables. I have only loaded MemoMaker once, and that was to see if it looked the same.

Reflection offers opportunity for communications, but is rather intimidating. I downloaded PPTERM from CompuServe's HP Forum. (PPTerm is also now available on *The Portable Paper* 1988 Subscriber's Disk.) It is an almost perfect terminal program for a portable (lower case intended) computer. The only flaw is that it will not configure for a 9600 or 19200 direct RS-232 connection. At 19200 baud Reflection will transfer files between a Plus and a T3100 (Toshiba) at about the speed that a Portable writes to the 9114 disk drive.

USING TOSHIBA-FORMATTED DISKS

I just discovered that my Plus will read and write disks formatted on the Toshiba. When calling up a directory, the Plus seems a little slow with a Toshiba disk. However, except for finding the directory, disk operations such as saving, reading and copying are as fast as with HP disks. There is probably some difference between directory entries on the two formats. I put an HP disk in the Toshiba and did **chkdsk**. This found the data in lost clusters. **dir** displayed garbage.

The Plus' internal modem is accurate enough for normal telephone connections. It is not as good as my WorldPort 1200 (should I upgrade to 2400 baud?). CompuServe here in Houston is a real test for a modem. I successfully downloaded files from C-Serve but I got an error rate of 30%. Visible errors make reading text difficult. The internal modem is not the worst modem I have used but it is not worth $500. With PPTERM and Reflection, something eventually seems to come through that locks up the computer. Rebooting is the only cure.

USEFUL UTILITIES

I am taking advantage of a number of techniques to make every byte of disk count. System Enhancement Associates' Archive Utility, **arc.exe**, compresses files not immediately

Portable Plus users:

1 MEGABYTE OF EXTRA HP MEMORY *FOR ONLY $795!*

If you need more System Memory/Edisc space in your Portable Plus, the most economical approach is a **1 Megabyte HP RAM Card**. The price to Portable Paper subscribers is **just $795**, a saving of $200 off the normal retail price.

EASY TO INSTALL

You install HP's 1 Megabyte RAM card in one of the two compartments at the bottom of your computer.

The procedure couldn't be simpler. Just remove two screws at one end of the compartment. (The proper kind of screwdriver is right in the package along with each 1 Megabyte RAM card.) Slide out the old card, slide in the new, and replace the screws. That's it!

MAKES A HUGE DIFFERENCE

If you've been facing memory limitations with your Portable Plus, you'll be amazed at all the flexibility you'll gain from even a single megabyte of extra memory. See for yourself. Order one or more 1 Megabyte HP RAM cards, at our risk, today.

1 Megabyte HP RAM card .....$995.
Portable Paper subscriber price .....$795.

(If ordering by mail, please write "1 MEG HP MEMORY CARD" on the order form in the enclosed Portable Equipment Exchange brochure. Or use the order form in back of this issue.)

(515) 472-6330
The Portable Equipment Exchange
—a division of Personalized Software
P.O. Box 869, Fairfield, IA 52556

TRADE IN YOUR OLD MEMORY CARD
If you need to remove an existing memory card in order to install a 1 Megabyte RAM card, don't throw the old card away! We'll be glad to offer you a *trade-in allowance*. For details, call us at 515/472-6330.

MANY WAYS TO USE IT

You can use the 1 Megabyte HP RAM card in a variety of different ways, depending on your needs. Here are some examples:

(Terminology: The compartments at the bottom of your Portable Plus are usually referred to as the *memory drawer* and the *software [ROM] drawer*.)

Example 1: Your memory drawer is currently empty. Install the 1 Megabyte RAM card there, and you gain a full megabyte of extra memory. ("Extra" means in addition to the 128K, 256K, or 512K of memory already built in to your Portable Plus.)

Example 2: Your memory drawer currently has a 384K memory card. Remove that card and install the 1 Megabyte RAM card in its place. You gain 640K (because you've removed 384K and replaced it with 1 megabyte, which actually is 1024K).

Example 3: Same as example 2, but remove the *software* drawer instead, and install the 1 Megabyte RAM card there. (Despite the names of the drawers, either kind of card can be installed in either drawer.) Now your extra memory totals 384K *plus* 1024K, or 1.408 megabytes in all.

Example 4:—for maximum memory: Remove whatever is currently in *both* drawers, and install *two* RAM cards. The RAM cards can be any combination of HP's 1 Megabyte RAM card or the extra memory cards made by SoftWord of Surrey, England. (SoftWord makes a 2 Megabyte RAM card and a 1 Megabyte RAM/8-socket ROM card. For details, see Personalized Software's two-page ad, "Add Megabytes of RAM—and ROM—*inside* your Portable Plus!" in this issue.)

needed. Personalized Software's DOS Tools ROM is worth its cost for this program alone. I found it a little difficult to get used to the **x** prefix (required by the ROM) to access many of my favorite utilities. However, with one or two exceptions the utilities in the ROM are as useable as when run directly.

I include three favorite Norton Utilities (in my utilities subdirectory **a:\bin** on my Edisc); FindFile (named **findf.com**), DirSort (**ds.com**), and Quick Unerase (**qu.com**). I am using the earliest versions of these programs available since they are smaller than later versions and seem to be functionally equivalent. Later versions provide menu assistance that I prefer not to use, and I therefore see no need to give them any space on my disk.

I considered a few other utilities (from Personalized Software's DOS Tools and 1987 Subscriber's Disks) important enough to receive a place in my utilities Edisc subdirectory. They are: **search.com**, **diskpack.com**, and **wd.com**. **diskpack** is distributed in **.exe** format. I used **x sm** (SpaceMaker) to convert it to a **.com** file. It saved only a few bytes but this was enough to make it occupy 1 sector (512 bytes) less of the disk. (I'll be able to dispose of **diskpack** when my Webster ROM arrives since it is included.)

A BATCH FILE FOR LOADING LOTUS 1-2-3

Batch files used to load various applications are saved in this subdirectory also. I use a long batch file named **l.bat** for loading Lotus 1-2-3. It **ren**ames a selected **.wkl** to **autol23.wkl**, allowing 1-2-3 applications such as **exprpt** (expense report) and **bankacct** (check register and bank statement reconciliation) to be displayed as PAM entries. **l.bat** allows the user to enter any 1-2-3 spreadsheet as a PAM application. **l.bat** will find the spreadsheet, even if it is stored in an archive, and return it to an archive upon exiting. (See *The Portable Paper*, Vol. 1, No. 5, p. 5, for an explanation of how to install a Lotus spreadsheet into PAM.) My **l.bat** batch file is too long to list here and would be extremely tedious (believe me) to have to key in from scratch. If you would like a copy of the batch file with its accompanying explanation, you may request "Pagedisk" from Personalized Software. *[Readers should send a formatted disk and a self-addressed, stamped envelope, or $7.50 to Personalized Software to request "Pagedisk" -Ed.]* Please note, however,—once you receive the disk you are on your own as time doesn't permit support from me or Personalized Software.

1-2-3 CUSTOM CONFIGURATION FILES

Should one job need printer setups for 141 characters per line and 88 lines per page, and another require 71 characters per line and 66 lines per page, **l.bat** can configure 1-2-3 to meet these requirements. It does this by replacing the default **3.cnf** file with a substitute from a library of configuration files stored on the working directory. This library can be extended almost indefinitely at very little cost of disk space by archiving configuration files with application spreadsheets. Practically, I find that a few general purpose configurations meet most of my needs. If you are not familiar with controlling 1-2-3 through configuration files, you should investigate the **/wgd** command.

l.bat is not a small file but it saves disk space since it eliminates the need for many batch files. Replaceable parameters in the batch file work this magic. These are fed to **l.bat** on the DOS command line or through **pam.mnu** entries.

I originally included a help facility and a utility for searching **system.arc** (which contains Lotus configuration files) in my prototype of **l.bat**. I decided to drop these options to reduce the size of the batch file and to speed its execution. However, should a nonexistent worksheet file be requested **l.bat** will display a listing of worksheet files including any worksheet files stored in archives. Worksheet archives are identified by the extension **.wka**. The Archive Utility normally expects archives to have an extension of

.arc. However, any extension may be forced with **arc** by simply typing it in and this is what **1.bat** does. If you wish to manually command **arc** to do something with a **wk**archive you must remember to give it the **.wka** extension.

Should a nonexistent 1-2-3 configuration file be requested **1.bat** will display a list of available configuration files and pause. Files in the configurations library are identified with **.cnx** as the extension.

USING STANDARD EXTENSIONS

I use the **.ltr** extension to identify letter files. You will see that I use various file naming conventions to identify related files. I try to use standard names and extensions when possible. For example, **.bat**, **.arc**, **.txt**, **.doc**, Where standards exist I certainly want to follow them. I would like to hear of alternate naming conventions if this (what I am using) conflicts with some program or other standard.

A BATCH FILE FOR CUSTOMIZING FUNCTION KEYS

fk.bat, another file stored in **a:\bin**, customizes DOS f-keys and the DOS prompt to indicate the set of active f-keys. F-keys are set by typing a text file containing escape sequences for setting f-keys, as well as positioning the cursor and performing other screen management chores. These files, identified with **.fk0** or **.fk1** extensions, were created with Personalized Software's The Editor program. For normal DOS operations, **f-2** becomes **del *.bak**, **f-5** becomes **pack disk**, **f-6** becomes **dir *.***, and **f-8** becomes **exit**. The other DOS editing keys retain their original functions. *[See* The Portable Paper *Vol. 1, No. 2, p. 3 and Vol. 2, No. 2. p. 28 -Ed.]*

fk.bat configures the prompt and sets function keys for DOS and several utilities (such as Right Writer) that are normally executed at the DOS prompt.

To distinguish my f-keys from the standard f-keys, I put the descriptions in lower case rather than initial caps. I attached Ed Gilbert's **diskpack** utility (rather than HP's **pack** program) to the **f-5** key. With 1.5 Meg of RAM I don't see much need to jockey between program memory and Edisc. However, files can become severely fragmented on the Edisc. I prefer **diskpack** because it eliminates this fragmentation and **pack** does not.

*[***fk.bat** *is also too long to list here, and is included on "Pagedisk." -Ed.]*

A BATCH FILE TO USE WITH TIME MANAGER

Serious Time Management users might have other ideas about how to best organize TM. This is what I am doing. Time Manager data files are stored in an archive named **tm.arc**. Two variations, **business.nam** and **personal.nam**, of **tm.nam** are used. PAM Menu entries "Personal TM" and "Business TM" activate a batch file named **tml.bat** (shown below) to select appropriate TM files from either the disk or the TM archive.

```
echo off
cls
echo . Time Manager Archive
echo .
if %1X==X goto HELP
if exist %1.nam goto REN
if exist *.nam arc e tm.arc %1.nam
if not exist *.nam arc e tm.arc %1.nam tm.tdo *.not
if not exist %1.nam goto OOPS
:REN
ren %1.nam tm.nam
if exist personal.nam arc m tm.arc personal.nam
if exist business.nam arc m tm.arc business.nam
if exist buddies.nam arc m tm.arc buddies.nam
echo .
tm
ren tm.nam %1.nam
if %2X==X goto END
echo .
echo . Saving Time Manager files in TM.ARC
echo .
arc m tm.arc %1.nam tm.tdo *.not
goto END
:HELP
echo .
echo . command: TML filename [X]
echo .
echo . filename is name of alternate TM namefile
echo . any character at X ARChives TM files in
TM.ARC
echo .
pause
cls
goto MARK
:OOPS
echo .
echo . Requested Time Manager name file, %1, not
available
:MARK
echo .
echo . Available Time Manager name files:
echo .
arc v tm.arc *.nam
echo .
pause
:END
cls
```

tml.bat assumes that three TM name files, **personal**, **business**, and **buddies** will be stored in an archive named **tm.arc**. It also assumes that only one "to do" list will be maintained and that Time Manager note files (**.not**) will be stored in the archive. To invoke the file, type **tml namefile [x]**.

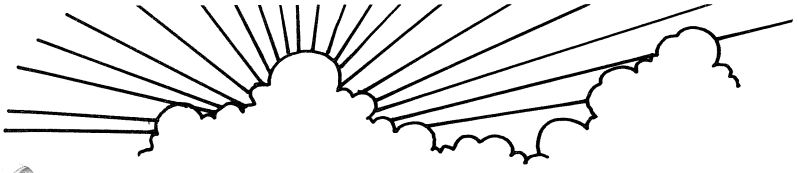
Namefile is the file name of the Time Manager file to be made current. The **x** parameter is optional, and is used to tell **tml.bat** to return all files to the archive after Time Manager is run.

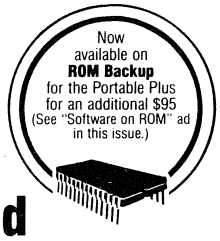
USE THE DEFAULT ROUTE

Fast system operation is one of my goals. It is almost as important as disk conservation. For this reason the default route through these batch files is generally the simplest path, if required archive extraction is automatic. Return of files to an archive is not. **1.bat** can be told to archive a worksheet file only by placing a parameter in the fourth position on the command line.

SEEING IF THE ARCHIVE IS SUCCESSFUL

I had to work around a flaw in the Archive Utility. Since it does not return DOS error levels, my batch file cannot





The Editor It's way beyond MemoMaker!

You won't believe all the word-processing features this $99.95* program contains—and it takes up less than 40K of memory!

***(only $79.95 for Portable Paper subscribers)**

by Hal Goldstein

Let's face it: MemoMaker is an adequate word-processor, but it has its limits. No search and replace. No simple way to merge files. No destructive backspace key. (To delete the last character, you have to use the left arrow key and the deletion key[s].) No compressed or expanded printing. No. . .—but why go on? If you use MemoMaker, you probably have your own list of things you wish it could do.

Well we have good news! Now there's an easy-to-use text editor that runs on the Portable and Portable Plus that will satisfy almost every item on your wish list. And the program comes with a built-in bonus: It also runs on the HP 150, IBM PC, and HP Vectra, which means that **now you can use the same program and files on your desktop that you use on your Portable.**

The program is called THE EDITOR. It does everything MemoMaker does plus a heck of a lot more. And you don't have to go to the expense of buying WordStar (for the Portable) or MS Word (for the Plus) to go beyond MemoMaker's capabilities.

THE EDITOR's most valuable features are listed on the chart to the right. It's quite a list, isn't it? To me, THE EDITOR is a real blessing. I use it daily instead of MemoMaker, and I've silently given thanks to its author, Ed Gilbert, many, many times. Just a few minutes with THE EDITOR (that's all it takes to be up and running) and I think you'll be a fan of his too.

In addition to the many great features listed to the right, there are five more I especially want to emphasize:

1. THE EDITOR's Lotus-like menus make it incredibly easy to use.

2. THE EDITOR creates ASCII files, which means you can send your files to and from almost any other program or computer without special formats or codes.

3. THE EDITOR will automatically back up your files to protect you against mistakes: When you save a file, THE EDITOR saves not just the current version, but the previous one as well.

4. THE EDITOR takes up less than 40K of memory.

5. THE EDITOR loads and saves files and executes commands exceptionally fast.

RECOMMENDED FOR:	
HP110 Portable	●
Portable Plus	●
Portable Vectra	●
HP150	●
IBM PC and compat.	●
Available on ROM Backup for the Portable Plus	

Even in the desktop market, **it is difficult to find a word processor with this many useful features at this low a price.** For the Portables, THE EDITOR simply can't be beat. See for yourself: Order your copy, risk-free, today.

THE EDITOR $99.95
$79.95 for Portable Paper subscribers.

60-DAY MONEY BACK GUARANTEE
See order form for details.

TO ORDER

Use postage-paid order form inside back cover or send check or credit card information (#, exp. date, signature) to:
Personalized Software
P.O. Box 869, Fairfield, IA 52556 515/472-6330

Special combined offer—
SAVE $30:
THE EDITOR and THE FORMATTER together—
Only $99.95 total (Portable Paper subscribers only

The Formatter

THE FORMATTER gives you advanced formatting capabilities that even THE EDITOR can't handle—like: multi-line headers and footers•automatic hyphenation (you can even add your own words to the built-in dictionary)•user-specified page length and line length•automatic page numbering•tables and charts•table of contents generation•and more.

THE FORMATTER works by imbedding special formatting codes into your EDITOR, MemoMaker, or other ASCII text files. You can customize THE FORMATTER for almost any printer .

Note: The user manual itself is a challenge, and no technical support is available. We therefore recommend THE FORMATTER for strong computer users or those already familiar with text formatters.

If you need any of the features listed above, and if you're willing to spend the time it takes to learn the commands, THE FORMATTER is for you. Order your copy, risk-free, today.

THE FORMATTER $59.95
$49.95 for Portable Paper subscribers

THE EDITOR gives you all these great text-editing features and more:

- **Search and replace.**
  Just tell THE EDITOR what word or phrase to look for, and it will find every place you've used it. At your option, it will display each occurrence, or replace the occurrences either selectively or globally.
- **Edit two files at once.**
  THE EDITOR will display two separate portions of text at the same time, one above the other. You can view and edit two parts of the same file—or even two different files—simultaneously.
- **Backspace delete.**
  You can erase the last character with a single keystroke.
- **No limit on file size.**
  If you're an HP110 Portable user, you're no longer confined by MemoMaker's 819-Line limit. You can have as large a file as internal memory allows.
- **File merge.**
  You can merge two or more files together with ease.
- Compressed and **expanded.**
  You're no longer restricted to bold and underline. You can imbed control characters in your text to tell your printer to print all or part of your text compressed, expanded, bold, underlined, or whatever else your printer can handle.
- **Unlimited line length.**
  Your files are no longer limited to 80 characters per line. This means, for example, you can print 132-character lines on your ThinkJet printer in compressed mode.
- **Lines per page.**
  You can specify the number of lines per page, using the control codes required by your printer.
- **Easy in, easy out.**
  You can exit from THE EDITOR, run another program, then type a one-word command and be back in THE EDITOR in a flash, exactly where you left off. This includes exiting and returning from DOS—which means you can delete, copy, and rename files while running THE EDITOR.
- **Right justification and automatic paragraph indent.**
  A simple command right-justifies your text, and at the same time automatically indents your paragraphs however many spaces you wish.
- **Undelete.**
  Erased something you want back? No problem. A simple command will undelete the last line or block of text deleted.
- **Upper/lower case conversion.**
  Another simple command lets you change upper case to lower case and vice-versa without having to retype anything.

In terms of useful features per dollar, and in terms of the convenience and increased productivity you gain, I feel that THE EDITOR is a truly exceptional buy. I urge you to try it. Order yours today.

Hal Goldstein

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More than 50 time-saving utilities for your HP Portable or HP150—all on a single disk

Read this list.
It may look long and boring, but it can save you an incredible amount of daily effort.

It's a list of the more than 50 programs on *Portable Utilities Disk, Volume 1: DOS Tools.* Each program performs a specific task to make life with your Portable more enjoyable and productive.

The programs are all in the public domain, which means that if you searched long enough you could find them for free on various electronic bulletin boards, in magazines, and in the archives of local user groups. But consider this: Even if you had the time to track this many programs down, what about evaluating them and making sense of the documentation? It would be a formidable task, but we have good news: You don't have to do it—we've already done it for you!

That's right—we've combed through hundreds of public domain utility programs that run on the Portables and HP150, and have selected only the best ones for inclusion in *Portable Utilities Disk, Volume 1: DOS Tools.* We've not only made sense of the documentation, but in many cases we've actually rewritten it. **(A printed, 65-page user manual containing program documentation and plenty of examples are included with the disk.** The manual is *conveniently indexed by subject*, so all you have to do is look up the name of the task you want done. You don't have to remember the names of the programs.)

And we've even changed some of the programs themselves so they work better and so their message displays are easier to understand. (Given the state of the art in writing and testing software, there's no guarantee that every item of software works as documented without a hitch. However, most of the testing and evaluating was done by Hal Goldstein, publisher of The Portable Paper, and by Gary Goodman and Thomas Page. Anyone who has read Gary's and Tom's articles in past issues of The Portable Paper already knows of their conscientiousness and thoroughness.)

So look through the list. If even *one* program proves useful, *DOS Tools* could pay for itself immediately. With more than 50 documented and tested programs to try out and use, it's the bargain of the century. Order yours today.

Portable Utilities Disk, Volume 1:
DOS Tools $49.95
($39.95 for Portable Paper subscribers)

Contents of Portable Utilities Disk Vol. 1: DOS Tools

ADDCOL.COM Joins two files horizontally by appending corresponding lines.

ARC512.ARC Archived ARC file compression and library utility.

ARCE.COM Extracts ARChive files from ARC 5.12 and previous versions.

ASK.COM Adds interactive capability to batch files. Prompts user with message and waits for yes/no response.

BEEP.COM Makes a beep sound.

CHANGE.COM Changes or displays file attributes (read-only, archive, system, hidden).

CLEAN.COM Converts WordStar HP150 or Portable Plus MemoMaker document files to ASCII and removes control codes.

COPYNEW.COM Backs up files if no identical file on the destination disk. Also backs up whole directory structure creating matching subdirectories.

CPU.COM Displays computer's clock speed.

CVTBIN.COM Converts files from ASCII to binary when downloaded with CompuServe READ command.

CYPHER.COM Enciphers and deciphers a file to keep it confidential.

DIRALL.COM Displays attributes and pathnames for ALL files on a disk.

DIRS.COM Gives total disk space occupied by a set of files.

DUMP.COM Dumps and edits a disk or file in hexadecimal and ASCII.

FDATE.COM Changes the time-date stamp on a file.

FDUMP.COM Lists a file in hexadecimal and ASCII.

FF.COM Sends a form feed to the printer.

FGREP.COM Searches a group of files for a specified string.

HC.COM Converts binary files to/from hexadecimal ASCII files.

HP IBM.COM Does a "best fit" translation from HP ROMAN 8 character set to IBM PC Line Draw character set.

IBM HP.COM Does a "best fit" translation from IBM PC Line Draw character set to HP ROMAN 8 character set.

INSTALLP.COM Automates installing an application program on RAM disk—the HP Portable/Portable Plus Install Utility Program.

LABEL.COM Labels or changes the label name on a disk.

LC.COM Counts lines in each file; useful in determining amount of paper needed to print.

LF.COM Sends a line feed to the printer.

LJET.COM LaserJet pronter configuration program for the HP Portable. Makes selection LaserJet format easier.

MMTOP.COM Causes Portable Plus MemoMaker to print without usual 5-line top margin.

MOVE.COM Moves one file to another directory without copying.

MOVEALL.COM Moves a set of files to another directory without copying.

OFF.COM Shuts off the HP Portable from DOS.

PACK.COM Packs a disk. Does not have subdirectories bug of earlier version.

PC.EXE Allows some IBM programs to be run on HP150.

PCBOSS.COM File manager for IBM PC and compatibles only.

PRINTIT.COM Print formatting program, simple but effective.

PRNCONF.COM Allows ThinkJet printer to function as Epson printer; also sends escape sequences to the PRN device.

RAMDSK.ARC Archived utility for HP150 only; creates internal RAM disk.

RENDIR.COM Renames subdirectories.

RNGNAME.COM Displays and restores range names for Lotus worksheet.

ROMAN8.WKS Provides ability to enter any Roman8 character into Lotus worksheet.

SDL.COM Produces directory listings sorted by name, size, date, or extension.

SEPARATE.COM Breaks large text files into smaller files for MemoMaker.

SM.COM SpaceMaker. Converts. EXE files to .COM files and thus saves disk storage space and disk access time.

SQPC.COM Squeezes files to make them take up less space. Unsqueeze with TY.

TEE.COM Causes a program or file to be output to both the screen and a file or printer.

TJETA.COM Configures ThinkJet printer easily from the HP Portable.

TOWS.COM Converts ASCII document files to WordStar and Portable Plus MemoMaker format for editing and reformatting.

TRANSLIT.COM Converts one or more characters of one file to different character(s) and copies result to second file.

TREEDIR.COM Displays names of all files in each directory along with date, time and file size.

TRIM.COM Extracts selected columns from a file.

TY.COM Unsqueezes files squeezed by SQPC.

VDL.COM Allows user to selectively delete files from a group of files. Program lists files one by one and asks user whether to delete.

WAIT.COM Delays execution of a batch file until specified time.

WD.COM Saves and restores the working directory.

WHEAROUT.COM Gives percent of wear on disk in HP 9114 disk drive.

WHEREIS.COM Searches disk to find the specified file.

APPENDIX A Describes the contents of subdirectories/HP110,/SOURCE,/123DEMO found on the *DOS Tools* disk.

UTILS.DOC Reprints on disk *The Portable Paper* Vol 1, Issue 4, "Utilities" article. Gives practical examples of many of the files on the DOSTools disk.

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Portable Vectra	●
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determine if **arc** is successful in extracting the worksheet from the archive. Since less disk space is required to create a new archive than to update an existing archive, the normal operation of **l.bat** deletes the archive after the file is extracted. I used the ROM DOS Tools **x ask** command to give the user a chance to stop the program if the archive is not successfully extracted. The shareware **pkarc** utilities are faster than **arc.exe** and return error-level codes (allowing them to integrate very well into batch files), but they are not on ROM and I don't have 40K of Edisc to spare.

PAM MENU ARRANGEMENT

Applications are installed in the PAM menu files in a logical order. The first line includes: DOS Commands (PAM insists on this), 1-2-3, The Editor, Spell Check, and RightWriter (DOS f-keys for RightWriter).

The second line has: DOS Commands (The real one, with reset f-keys), FONE (Loads Reflection and requests – to call), SYSOP (Logs on to office RBBS), CompuServe, and RS-232 (19200 baud port to port connection).

The third line: Archive (DOS f-keys for Archive Utility), Business TM, Personal TM, ExpRpt (Expense Report spreadsheet), and BankAcct (Check Register spreadsheet).

Beginning with the fourth line, my entries are variable and may include current spreadsheet projects and installed applications such as (games like) Deadline or Seastalker.

Even though I often use mindless PAM Menu entries to load programs, I am not fond of PAM. It is slow even if the external disk is not connected. I tolerate it since in addition to identifying installed applications it performs useful functions such as setting alarms for Time Manager, turning off the modem and serial port and resetting f-keys for those programs that do not clean up after themselves.

CONCLUSION

One of the most frustrating aspects of using computers is that there are often many different means of accomplishing one specific task. I have described some of the organizational techniques I use from day to day. Some of these methods are universal. Some may not be applicable to you. Any organizational scheme must be tailored to the individual user. Remember, however, that even a small amount of "DISKorganization" is better than disorganization. (Sorry—couldn't resist.)

GRIMMER'S *Portable Tales*

by Paul Grimmer

My objectives in this column are to provide tips on operating the HP110 Portable and the Portable Plus, as well as to offer some insights on programming these machines. The language we will use is Turbo Pascal since, in my opinion, it is the best blend of power and programming utility currently available for microcomputers. Also, its small size makes it very usable on the Portables. Let me defuse any arguments this may cause by saying that the concepts presented here should be applicable to all languages.

The Portables are wonderful machines, for a variety of reasons. I know that I do not have to waste time convincing you of their virtues since you already own one, and would agree with at least some of my praise. We are all painfully aware that the one major drawback of the machines is their incompatibility with the mainstream MS-DOS world. Rather than complain about this, I think we can turn this into somewhat of an advantage if we can make use of those differences.

DOS TIPS

Last issue, I mentioned that there was a simple utility called **more.com** that enabled a user to look at any text file in a straightforward and easy way. Dr. Sergio Biguzzi pointed out that you can shorten the command to just **more** followed by the filename (i.e., you do not need **type filename | more**).

I recently bought a 1 Meg board for my Portable Plus. It is great but there is a potential problem now that the memory of my Edisc exceeds that of one 3.5" floppy. One easy solution is as follows: for a simpler **path** command you should have as many of your executable files (e.g., **wp.exe**), your **.sys** files (such as **shelp.sys**, **mouse.sys**), and your configuration files as possible in one subdirectory. These kinds of files will not be changed, so they do not have to be "backed-up." These will also probably account for the bulk of your Edisc space. On your designated back-up disk, you should only copy the files from your Edisc that have been changed. I wrote a small batch file that uses the **bac.com** utility (found on the DOS Utilities disk from Personalized Software and available on many bulletin boards) to copy only those files that have been changed. Even though my Edisc is now 1.3 Meg, I can easily perform back-ups to a 710k floppy.

If disk space is still a problem, note that the only time that you need **config.sys**, **mouse.sys**, and **shelp.sys** (or any **.sys** file, for that matter) is when the computer is booted up. If you choose to delete these after booting, you can save a lot of disk space. For example, these three **.sys** files "waste" about 13.5k. Since I do a lot of low-level "hacking" on the Portables, I crash my machines more often than many users probably do and I have found that it is not too much of a hassle to recopy the **.sys** files to the Edisc, reboot, and then delete them again. In fact, **config.sys** is the only one that really ever needs to be on the A: drive, since the others are specified in a path name in the **config.sys** file.

PROGRAMMING PROJECT FOR THE PORTABLES

Our programming project for the year will be to make a pop-up like SideKick for the Portables. This program is intended to be flexible enough so that any programmers (and there are quite a few out there) will be able to simply drop their code (for a calendar, phone dialer, etc.) into our shell

and recompile it. This kind of program is sorely needed for the Portables, and it will also enable us to do some rather nifty things with the machines.

The first thing we need for our pop-up program is a name (Porta-Poppy ?). If you have any suggestions, give me a call at 907-345-3593 or leave me a message on CompuServe (ID– 71370,1303). Also, let me know the types of things you would like to see in a pop-up that are not listed below:
keyboard macros (any key)
notepad with paste capability
phone dialer
calculator
small database
appointment scheduler

DEFINING CRITERIA FOR THE PROJECT

From a technical standpoint, a program that terminates but stays memory-resident (TSR) is one of the most difficult programming efforts in the world of DOS. Most are done in assembly language, but we will set as one of our criteria that the TSR must be written in Turbo Pascal, since it will be much quicker to add modules and maintain. In addition, our experience as a user group is with high-level languages, not assembler.

Our TSR will work through a set of routines that we will use to set up our program. The whole thing will then go memory resident and at the appropriate time it will pop-up (or insert keypresses into the keybuffer or whatever), then go back in hiding so that whatever other program we are running will not even know that it ever came up. The design of the program will be modular; once the "shell" routines are written, we will be able to drop our code in the appropriate place and have a new or modified pop-up.

There are many points that we must consider as we construct the TSR:
1) The TSR at first will not do anything other than initialize some variables and steal some interrupts and then terminate, returning control to DOS but staying resident in memory.
2) At the appropriate time the program will interrupt whatever is running and take over. Normally this will be as a result of a "hot key" being pressed but it can be after a certain time or whatever. This is probably the most important part of the TSR. We want to be able to re-enter DOS and our Turbo program, both of which we are not "supposed" to be able to do. In the case of a keypress causing the pop-up, we have to "steal" the keyboard functions in the machine, watching all the keys that are pressed, and passing on all of those that we don't want. Even after we find the one we want, we have to use some trickery to determine if it is "safe" to take over. For example, if the program currently running is writing to a disk it would be a disaster if we were to pop-up and do some disk operations. In many cases we will have to wait until it is safe before we take over.
3) Once we decide it is okay to take control, we will apply some more trickery so that we can get back into DOS and also Turbo. If what we are trying to do involves any screen activity, we will also have to save the portion of the screen that we want to use so that we can restore it when we're finished with it. Generally we will operate within windows (it gets complicated when we try to add in the capability to move the window).
4) Once we are through with the pop-up, we have to restore everything to the way it was before we popped up. This is no easy chore but relative to everything else it is a piece of cake.

ADDITIONAL FEATURES FOR THE PROJECT

There are a number of other chores we have to include in our program. For example, it is bad if our pop-up were to abort due to an error of any kind. DOS gets very confused when this happens and if you are lucky the only solution is a reboot. This means we must catch ALL errors and respond in a nondestructive manner. Turbo lets us do some of this and we will improvise the rest (relax, most of this part is already written).

If you just want a set of working programs and are not interested in the programming aspects, then sit back and watch the fireworks. If you are interested in learning and/or participating, I recommend that you get a good book on DOS (Ray Duncan's "Advanced MS-DOS," Peter Norton's "Programmer's Guide to the IBM PC," or the "DOS Technical Reference Manual") as well as the Portable Plus Technical Reference Manual. We will make sure that the source code is fully commented to ease your pain.

USING INLINE.COM WITH TURBO PASCAL

Unfortunately, some of what we want to do cannot be done without some assembly language. We will try to minimize it as much as possible. If you know some assembly language, using it within Turbo Pascal is a lot easier than you may think if you use **inline.com**, available in the Borland forum on CompuServe. This is a program that takes normal assembly code and assembles it into beautiful Inline code that Turbo Pascal recognizes. It is quite good and easy to use.

In order not to clutter up this column with a lot of code, I will refer you to the HP forum on CompuServe if you want to keep up with our project. Between now and the next issue we will post a critical error handler (i.e., how to avoid the nasty "Abort, Retry, Ignore?" message), a technique for windows including saving/restoring the current screen, and a fastwrite routine for the Portable and the Plus.

INCREASING THE PORTABLE PLUS' SCREEN SPEED

In closing, I will show you a simple technique for the Plus that increases screen speed by more than three times. You will not have to modify any of your existing code and it adds only 32 bytes to your programs. Just insert the following variable at the top of your program:

```
Var AsZ2Byte : array[0..1] of char;
```

Now insert the following procedure anywhere in your program:

```
procedure PlusConDriver(ch : char);
begin
AsZ2Byte[0]:=ch;
inline(
   $BB/$06/$00/                    {mov bx,6 }
   $BE/AsZ2Byte/          {mov si,AsZ2Byte}
   $CD/$50);                         {int $50 }
end;
```

We're almost there! In your main program you must

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put the following two lines so that screen output uses our procedure rather than using DOS:

```
AsZ2Byte[1]:=#0;
ConOutPtr:=ofs(PlusConDriver);
```

Refer to pp. 209-210 of the Turbo Pascal Reference Manual for a discussion of "User Written I/O Drivers." The procedure we are using makes use of function 6 of interrupt 50h of the Portable Plus (only). This routine sends an ASCII Z string (i.e., ends with ASCII 0) to the display, bypassing DOS, although it does process escape sequences. What I have done is send a two-character string to the interrupt as the variable "ASZ2Byte" with the first character as the one we want to display and the second always as ASCII 0.

There are several other techniques which are even faster than this but none are as simple and none can process escape sequences. In our pop-up we will have at least two others, one that even has windowing capabilities just as described in the Turbo manual as an "IBM Goody."

TURBO PASCAL 4.0 USEFUL FOR PORTABLE USERS?

One last observation: Turbo Pascal 4.0 is out but I think it may be premature for HP110/Portable Plus users to switch. I will write a review for the next issue of *The Portable Paper* that covers it more fully. At this point, the "cons" (lack of generic MS-DOS support, including no editor) appear to outweigh the "pros." I doubt if it will ever beat version 3.0 on the Portable since even the commandline version of the compiler requires 79k of disk space (42k for the compiler and 37k for the base library). For Portable Plus users it will be a good package when we get around to duplicating the "CRT" unit for our machines (i.e., the one that contains all of the IBM PC goodies). More on this later.

[Paul Grimmer, president of Southern Software, writes commercial and public domain software for the HP110 and Portable Plus. His credits include SideWinder *for sideways printing of spreadsheets to the ThinkJet printer;* Sketch *for free-form graphics on the Portables and ThinkJet,* Hprint *for fully exploiting the text, font, and graphics capabilities of the ThinkJet and QuietJet printers; and* Link, *which enables the transfer of data between all HP-IL devices. "On the side" he works as an engineer at Conoco.*

You can write Paul at 12501 Clippership Dr., Anchorage, AK 99515 or send E-mail on CompuServe to: 71370,1303.]

Through the Looking Glass

By Ed Keefe

KEEP ON SMILING

In a previous article (Vol. 3, No. 1) I discussed the MC-II hand held computer made by Corvallis Microtechnology. This past week I received two 8 X 10 black-and-white photographs of the computer. The display of the MC-II appears to be quite readable. It almost smiles at you with its bold, dark characters. At the same time, CMT announced that shipment of the MC-II would be delayed for a month or so. Now that's what I call a "Looking Glass" event. Remember the Cheshire cat?

TURBO PASCAL 4.0: NO LAUGHING MATTER

Turbo Pascal version 4.0 has arrived and is getting a real workout on my desktop computer. It's a delight to work with: "fast" is the best word to describe it. Turbo Pascal can no longer be laughed at. It has lost its adolescent awkwardness and matured. It is now a language for professional programmers: the kind of people who say "damn the byte-count, full speed ahead."

RUNNING TP4 ON THE HP PORTABLES

A question. Does Turbo Pascal 4.0 (TP4) work on the HP110 and Portable Plus? The answer is "yes and no." The integrated environment version of TP4 does NOT work on the HP110 and the Portable Plus, but will run "as is" on the HP Portable Vectra. The integrated version has pull-down menus and pop-up help screens. It requires IBM-PC compatibility along with 384K bytes of memory.

However, Borland has provided another version of TP4. This rendition of TP4 is what Borland calls the "command line version." It contains only the compiler and the Turbo Pascal Library (a disk file named **turbo.tpl**). Ostensibly, this version of TP4 is for the die-hard "hackers" who use custom text editors and extended batch files. This version WILL work, out-of-the-box, on the HP110. You must use your own text editor to write your programs. MemoMaker, in ASCII mode, will serve the purpose. The compiler and TPL file consume about 80K bytes of disk space. The program calls for 256K bytes of working memory, so on the HP 110, you won't be able to keep the files on the Edisc and still run the compiler. However, on the Portable Plus, with more memory, this should be possible.

THE ADVANTAGES (AND DISADVANTAGES) OF TP4

What are some advantages of TP4? Well, for one thing, the compiler optimizes the code of your programs. This means that it discards any code that is not absolutely necessary to run your program. Thus, small programs stay small even in their compiled version. On the other hand, if your applications require more than 64K bytes of code, then TP4 can handle that as well.

Are there any disadvantages? Yes, indeed there are. For one thing, you will have to be satisfied with writing strictly standard Pascal programs. Essentially, this means that you will be limited to **Read/ln** and **Write/ln** commands for keyboard input and screen output. You will not be able to

HPduette

It transfers files both ways between your Portable Plus and your desktop computer without an HP-IL card!

An HP-IL card inside your IBM PC or compatible computer lets you transfer files to and from your Portable Plus.

It's a good solution to the data transfer problem, *provided* you only use one desktop computer. But if you ever need to transfer data between your Portable Plus and someone else's desktop computer, you're stuck—or at least you were until now.

Because now there's a way to do it with software.

It's a program called HPDuette. Together with a special serial connecting cable that it comes with, HPDuette is all you need to transfer files at high speed both ways between your Portable Plus and any IBM PC compatible desktop.

RECOMMENDED FOR:			
HP110 Portable		Portable Vectra	
Portable Plus	•	HP150	
IBM PC and compatibles			•

HPDuette performs complete error checking during the transfer process to ensure data integrity. It handles multiple-file transfers, subdirectory transfers, and DOS "wild card" usage. It lets you use DOS commands such as type, list, rename, and erase without having to exit the program. And it transfers data *faster* than you can with an HP-IL card.

HPDuette is easy to use too. Simple menus and easy-to-understand help screens are available at all times.

For true convenience in file transfer to and from your Portable Plus, order HPDuette today.

HPDuette with cable for Portable Plus . . . $99.95
$89.95 for Portable Paper subscribers.

HPDuette is a registered trademark of Platte River Associates, Inc.

HPduette comes with a serial cable and two disks; you load one disk into your Portable Plus and the other into the desktop.

HPDuette transfers data at 57,600 baud. To use HPDuette, you connect the 9-pin serial port on your Portable Plus to the serial port on your desktop computer using the serial cable that comes with the program.

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use such commands as **GotoXY(1,1)** to position the cursor at the top of the screen. The code for that command works only on PC-compatible machines. (It would crash the HP110 or Portable Plus.) Similarly, to get the HPIL printer to work with your programs will be a challenge left to the experts. Perhaps a wizard or two will rework the **turbo.tpl** file so TP4 can be made to be more useful on the HP110 and Portable Plus.

CHANGING OLD HABITS

If you are thinking of upgrading to TP4, prepare yourself for some unlearning of old habits. A lot has changed in Turbo Pascal. For example, most compiler directives have been outmoded or their effect is different in TP4. The **ReadKey** command replaces the old **read(kbd,ch);** command. Character data types are no longer compatible with string[1] data types. There are no more Chain files or overlay procedures.

The 650 page Users Manual lists all of the changes. However, don't count on the Users Manual to teach you programming. I have found that most of the examples shown in the book are fragmented and incomplete.

IS TP4 WORTH IT?

Is TP4 worth the cost of upgrading? If you're an inveterate user of Turbo Pascal, and you're also upgrading your hardware to a Vectra CS, then add about $35 to your cost and upgrade to TP4. You won't be disappointed. On the other hand, if you're staying with the HP110 or Portable Plus then stay with TP3. You'll save yourself a few dollars, and, more important, you'll save hours of frustration.

DEFINITELY A LAUGHING MATTER

Over the semester break, I had a chance to look at a lot of software that has been languishing in my IN basket. Sorry to say, none of it worked on the HP 110 or Portable Plus. However, if you have a Vectra CS or another PC-compatible computer you might want to take a look at these programs.

One of the funniest programs I have ever seen is MindReader. It's not a game or a book of jokes, but rather a word processor, and a funny one. MindReader is a shareware program available from Brown Bag Software and can be downloaded from most local bulletin boards. I'll probably never use it as a word processor. However, if I ever throw a computer party, it's sure to be invited.

MindReader is billed as a program with artificial intelligence. When you begin to type, MindReader lets you type the first few letters in a word. Then it will pop up a small list of words that it "thinks" you are going to type. All you have to do is point at the right word and that word will drop into your text. Its creators claim that if it is used consistently, MindReader will "learn" your vocabulary and move your favorite words to the top of its pop-up list.

MindReader has all the usual features of a word processor. It will copy, move, delete blocks of text, undo mistakes, and re-format paragraphs. It does a respectable job of formatting a document for printing. It even includes

a calculator mode that can add numbers across the page as well as down the screen. There is a built-in address book. MindReader will let you write macros to create boilerplate letters that practically compose themselves.

WHAT MAKES MINDREADER SO FUNNY?

Now there's nothing funny about all that. What is funny is the light and sound show that is part of MindReader. Pop-up menus don't just pop up. They whoop up and boink and bink at you. Windows don't just explode on the screen. They whoosh into view. Almost every command has its own sound effect. And the colors have to be seen! All of the screens look like they were designed by the same people who make Hawaiian shirts. I think that the designer of MindReader must have written the program with tongue-in-cheek. It demonstrates such grossly poor taste that it is funny. Oh yes, there is a command in MindReader to adjust the volume of the bells and whistles and mute the colors. However, I like to run MindReader at full volume with its most garish colors racing around the border of the screen. I like to use it for otherwise colorless memos and dull reports.

LET'S GET SERIOUS

In a more serious vein, and also in the realm of word processing, there is GALAXY, version 2.3.

For the past year, GALAXY has been my word processor of choice. It is easy to learn and to relearn (after periods of non-use). The newest version of GALAXY is what I thought impossible: it is improved. File retrieval and saving is faster than before. The program will now let you load a file by pointing at the file's name in much the same way that you retrieve a file in 1-2-3. The new version also contains a macro writing capability. It requires just turning on the macro recorder and performing a series of keystrokes. The same keystrokes can be replayed again and again at the push of a single key.

GALAXY was originally written in Turbo Pascal. The new version has been converted to Turbo Pascal 4.0. Now instead of several program files there is just one large file of 140K bytes. There is no longer any Setup program. Screen colors and default directories may be chosen from within the program and then saved in the program itself.

GALAXY simulates the best of WordStar (but with the speed WordStar lacks), and the best of MS Word, without the complexity. It's fast and handles almost all of my text processing tasks.

GALAXY 2.3 is a shareware program which is available from many electronic bulletin boards. It will take about half an hour to download at 1200 baud. It is also available, directly, from OMNIVERSE, Inc., P.O. Box 2974 Renton, WA 98056.

Sad to say, GALAXY will not run on either the HP110 or the Portable Plus. However, it should run admirably well on the Vectra CS.

ATTENTION NUMBER CRUNCHERS

For those who use a spreadsheet more than they do a word processor, behold another product from Borland International: Quattro. Quattro is a commercial spreadsheet program that sells for $195 list. Mail order houses are already discounting it at $130. This price will get you four disks containing almost 1.2 Megabytes of program and text files, along with three large manuals.

Quattro will run right out of the box on most PC-compatible computers. This means that it should work well on the Vectra CS. It will not run on the Portable Plus.

Quattro has its own menu structure, which differs from that used by Lotus 1-2-3. If you want to use the optional 1-2-3 menu structure, you may. As a matter of fact, that is the only way that you will get any of your Lotus worksheets to run in Quattro. When I first read that Quattro could have a 1-2-3 style menu, I thought it could be made to have the look and feel of 1-2-3, but that's not the case. Quattro uses the same command words as 1-2-3. However, the Quattro menu pops up on the right side of the screen. The cursor slides up and down rather than back and forth. The command description line still appears at the top of the screen and this takes some getting used to.

Many of my own 1-2-3 worksheets, including the TimeLog worksheet and my Automated Gradebook, did not fare too well when they were run in Quattro. It took several hours of re-programming to get the menus to look presentable.

Quattro is faster than 1-2-3 in recalculating large spreadsheets and its graphs are almost presentation quality. Nonetheless, I think it is no great loss that Quattro does not work on the Portable Plus. However, if you are looking for a full-featured spreadsheet for the Vectra CS, you might want to look at Quattro. It costs less than 1-2-3 and does more. Almost all of the files for Quattro should fit on one microfloppy. This would leave another disk free for data files.

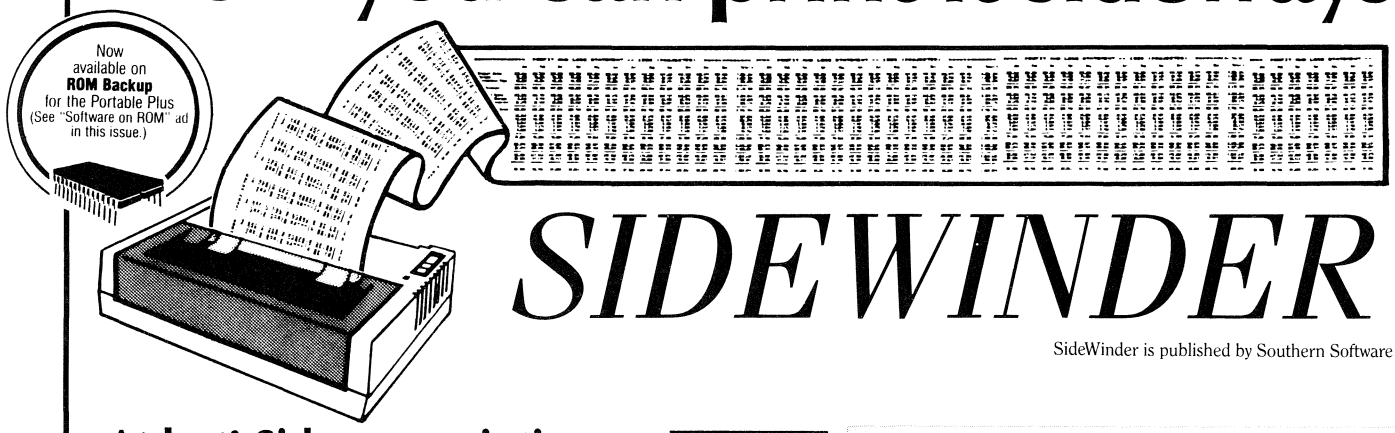
Many people do not need the horse power of a Quattro or even the muscle of 1-2-3. So why pay big bucks for something that is useful only as a status symbol? To answer that question PC Magazine recently critiqued several spreadsheet programs that sell for less than $100. However, the reviewers missed my favorite inexpensive spreadsheet: AsEasyAs.

ABOUT AS EASY AS ...

AsEasyAs can accommodate up to 256 columns and 1024 rows. It does graphs fairly well and performs database, statistical and financial functions. AsEasyAs CAN be made to look and feel like 1-2-3. However, the macro language of AsEasyAs is different from that of 1-2-3. For example, the help screen for macros lists such commands as "MenuOn", "MenuOff," " Tone( )," and even "Write" and "Writeln" (which betrays the Pascal heritage of AsEasyAs).

One clever feature of AsEasyAs is its fast matrix routines. With the Array command you can add, subtract, multiply, invert, and transpose non-unique arrays. There is even a command to solve simultaneous equations. The catch is that there is no documentation to show you how to use these functions. However, a payment of $30 to the author will get you the latest version of the program and a printed manual. AsEasyAs is still in the process of developing. I have version 3.00D. There may be a more recent version by the time you read this. If you want to try this program, I would recommend downloading it from a bulletin board. You may also write to the author in care of Trius, Inc. 15 Atkinson St. Lynn, MA 01905.

No more cutting and pasting- Now you can print it sideways!



SIDEWINDER

SideWinder is published by Southern Software

At last! Sideways printing for the HP Portable, Portable PLUS, and ThinkJet!

(And the HP150, Vectra, IBM PC, MS-DOS computers, and most HP graphics printers.)

RECOMMENDED FOR:	
HP110 Portable	●
Portable Plus	●
Portable Vectra	●
HP150	●
IBM PC and compat.	●
Available on ROM Backup for the Portable Plus	

It's called SideWinder, and it's perfect for Lotus 1-2-3 print files, MemoMaker files, or any other text (ASCII) file that's too wide for a normal page.

Just type in the file name, and SideWinder does the rest, printing up to 53*rows *sideways* - for as long as your paper supply lasts. You'll never need to cut and paste again!

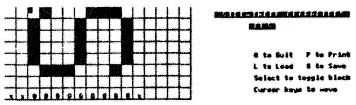
SideWinder's high-quality graphics characters are indistinguishable from ordinary characters, and SideWinder prints just as fast as your ThinkJet can.

In addition, a built-in mini text editor lets you get inside your print files and easily create **double-width** characters and underlines.

SideWinder $69.95
$59.95 for Portable Paper subscribers

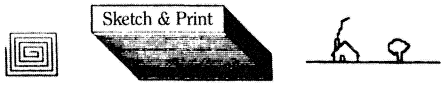
OPTIONAL EXTRAS: Southern Software of New Orleans, creators of SideWinder, have also created two companion utilities that work only on The HP Portables:

SideChar lets you create your own sideways characters.



Simply fill in a grid on your Portable to modify SideWinder's built-in characters. . . create italics. . . Hebrew letters. . . integral signs. . . whatever sideways characters you wish.

Sketch & Print lets you make line drawings on your screen using the cursor and function keys.



It's a lot like those Etch/Sketch toys you played with as a child. (Actually, it's even better because you can draw not just horizontal and vertical lines, but also *diagonals* with a single key.) Sketch & Print also lets you print - and save - anything you draw on the screen.

$10 for both utilities when purchased with SideWinder

For a *complete* graphics software program, see ad for "Sketch" in this issue.

Order form and guarantee are on inside back cover or send check or credit card number to Personalized Software, PO Box 869, Fairfield IA 52556 (515) 472-6330.

SideWinder 1.01 owners may upgrade to current version 2.01, which supports 8 chars/inch, by sending Personalized Software $7.50 or by mailing a self-addressed $.39 stamped envelope and the SideWinder master disk.

*105 rows for QuietJet Printer

Lotus and 1-2-3 are registered trademarks of Lotus Development Corp.

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A NEW LEASE ON LIFE FOR A QUIET, LITTLE COMPUTER

As you may have surmised, my HP110 has been pushed into the background in favor of a PC-compatible desktop computer. I miss using the 110. It's a great little machine and for almost two years it was my only computer. It ran faithfully, quietly, and almost flawlessly. Now it sits on my desk running continuously. It keeps accurate time with the CLOCK110 program (available on this year's Subscriber's Disk). However, it no longer gets the attention it deserves.

That may soon change. My wife has a new job as activity director of a retirement village. The job involves a lot of paper work as well as the enjoyable aspect of working with people. Helen keeps asking if I ever use the "quiet, little computer" any more. I can take a hint. The quiet, little, HP110 may get a new lease on life. It may even be happy filling out forms, planning activities and coordinating staff schedules. I hope so. The Time Manager program, along with 1-2-3, MemoMaker, and one or two dBASE II programs should keep it active for a couple more years. I'll keep you posted.

Until next time, Happy Porting.

[Ed Keefe is an author, programmer, and computer science instructor. He is the president of the FastAid Company, 314 SW Logan, Ankeny, IA 50021. Ed's CompuServe ID is 73277,1064.]

[You can obtain the shareware programs mentioned in this article (MindReader, Galaxy 2.3, and AsEasyAs) from Personalized Software. *You may send either $7.50 or a formatted disk with a self-addressed, stamped envelope. Remember, if you use the program, you must pay an additional shareware fee to the author. -Ed.]*

by The Wizard, Cliff Looyenga

DOS Files: Backups, Attributes, and Security

RECOVERING LOST FILES

Every once in a while someone will bring me a portable and hopefully ask me if there is some way I can save a file that got inadvertently trashed. The first thing I do is determine which represents less work, to have them reconstruct their file or for me to try and piece it back together again with the Norton Utilities program.

If the file is a simple text (ASCII) file such as a MemoMaker file, and the user has not tampered with the Edisc in any way, the Norton **qu** command will normally be able to recover the file in seconds. Otherwise, it may take lots of work or be impossible to recover. I'm always amused to see how important these lost files are to the user, yet he/she never bothered to back them up. I've got to admit, backing up the portable is a pain, but not nearly as painful as the consequences of not backing up!

BACKING UP PORTABLE FILES

So what is the best way to back up an HP Portable? This is one of the questions I am asked most frequently. I don't know if there is a "best" way—as always there are tradeoffs. On my HP110, I organize my Edisc so that my important work files are in a subdirectory. All I do to back them up is copy the contents of the subdirectory to a floppy disk using the DOS copy command. This works all right for my 110 because its Edisc is so small, so the backup is quick and easy.

My Portable Plus, however, has much more memory and therefore the organization of the Edisc isn't so simple. What seems to work best for me is the backup/restore program that is usually included with DOS (including that for the Portable Vectra). The backup program gives you the option to backup only the files that have been modified since the last time you did a backup. It will also search your subdirectories so that you don't have to back them up separately. However, when you need to restore a file, you can't just copy it off the backup floppy with the DOS copy command, you must use the restore program.

I was naturally curious as to how the backup program knew what files I'd modified since the last time I used the program. DOS does this by keeping some information about the file in its directory. For one, it keeps track of each file's attribute. There are five possible attributes: directory, system, hidden, read-only, and archive.

FILE ATTRIBUTES

The directory attribute indicates whether the "file" is really a subdirectory, and the system attribute tells DOS that the file is a system file used by DOS. The hidden attribute hides the file from the **dir** command; (more on this later). The read-only attribute protects files from being changed or deleted, and the archive attribute is used any time the file is modified. The archive attribute is what the backup program uses. The backup program only backs up files that have the archive attribute on, and once it backs up a file it turns the archive bit off. After that, the only time the archive attribute is turned back on is when the file is opened with write access.

There are a number of programs that allow you to view and/or change the attributes of a file. I have been using the program called **change**. (**change** is available on the Personalized Software "Best Of DOS Tools" disk. The Norton Utilities **fa -file attribute** program also does the same thing.) I use this program to be sure a particular file is backed up (or is not). If it's not right, I can run the program to change the archive bit to what I want.

SECURING A FILE

Another question I'm frequently asked is whether there is any way to secure a file so that others using the computer can't see it. One way is to "encrypt" the files you want secured. (You can encrypt files by using my program **cypher**, found on the DOS Tools Disk, or by using Private File, also available from Personalized Software.) This is acceptable, but has the inconvenience of having to run a utility before and after using the file. A more serious problem with using encrypting utilities is that when you forget your "lockword" you might just as well delete the file because there isn't any easy way to decipher it.

Another way to secure a file is to use the hidden attribute. When the hidden attribute is set for a file, the file becomes hidden to the **dir**, **del**, and **copy** commands. You can hide a file by using the Norton **fa** command or the DOS Tools **change** command.

I created a subdirectory, and then used the Norton Utilities to "hide" the subdirectory. When someone types **dir** in the root directory, it doesn't show the additional "hidden" subdirectory. I use the hidden subdirectory to hold all my secured files. When I want to use them, I don't have to bother with a utility to decipher the file I want, and I can still **dir** the contents of the subdirectory. This method isn't entirely secure, because there are utilities that list hidden files. It does, however, keep the average person from snooping into my files.

If you are interested in trying this, use the Norton Utilities to "explore" the file "root directory." Norton will show you the directory in directory format. Pressing **Return** will cause the format to be changed to Hex/ascii. The attribute of a file is stored as the byte following the file name. The attribute byte for a subdirectory should be hex 20. Use your cursor keys to move to the byte following the subdirectory you want to make hidden, and change the 20 to 22. Once that is done, press escape and have the Norton Utilities save the changes to disk. At this point you are done, so go ahead and exit the Norton Utilities.

Preview of coming attractions. . . I've ordered a Portable Vectra with a hard disk. You'll be hearing more about it, and Portable Vectras in general, in upcoming issues.

[Cliff Looyenga provides technical support for HP PC's and HP 3000's, and in those circles he is known as "The Wizard." He has developed a number of HP110 Portable and Portable Plus utilities. Cliff's CompuServe ID # is 75106,2130.]

WordPerfect customized for the Portable Plus and HP150

WordPerfect. It's the best-selling word processor for the IBM PC. According to many reviewers, it's the best word processor on the market.

WordPerfect is a word-processing powerhouse. Its advanced features include creation of text in columns, automatic footnote formatting and numbering, mail merging, and text sorting.

Now there are versions of WordPerfect for the HP Portable Plus and the HP150 touchscreen. In either case, it's the full-blown Version 4.2, complete with comprehensive thesaurus and 115,000-word spelling checker.

Not only can you use WordPerfect on your HP computer, but if you already have WordPerfect for your PC, you now can transfer files back and forth between your PC and your Portable Plus or HP150. The same WordPerfect features and commands work on all three machines. (The function key layout is different on the HP machines, but this is a simple matter for most PC users to adjust to.)

WordPerfect's powerful yet easy-to-use features have made it a best-seller. It's perfect for the Portable Plus or the HP150... and it just may be perfect for you. Order a copy today and use it at our risk. If, within 60 days, you are dissatisfied for any reason, simply return it for a full refund.

WordPerfect . . . . . $495.
$299 for Portable Paper subscribers.

IMPORTANT: Be sure to specify whether you want the Portable Plus version or the HP150 version.

Note to Portable Plus users: As always, you have to plan memory space in the Portable Plus. You'll need 512K of RAM to allow space for the basic WordPerfect program and still leave room for other files on your electronic disk. To fit *everything* on your A drive, you'll need an additional 340K for the spelling checker, and 360K for the thesaurus. (The speller and thesaurus can be run from your HP9114 if you wish.)

Our version of WordPerfect includes an 8-page supplement to the manual that tells you how to run WordPerfect on the Portable Plus.

Note to HP150 users: By special arrangement with WordPerfect Corporation, our version of WordPerfect includes the standard 5¼" disk plus our supplementary *double-sided* 3½" disk that customizes the program for HP150 users. The disk includes a special utility that allows WordPerfect to run on the 150. (If your HP150 requires *single-sided* disks and also has a hard disk drive, a version of WordPerfect is available that will run on your machine. Specify "single-sided on your orders.)

RECOMMENDED FOR:	
HP110 Portable	
Portable Plus	●
Portable Vectra	●
HP150	●
IBM PC and compat.	●

60-DAY MONEY BACK GUARANTEE
See order form for details.

TO ORDER
Use postage-paid order form inside back cover or send check or credit card information (#, exp. date, signature) to:
Personalized Software
P.O. Box 869, Fairfield, IA 52556 515/472-6330

We ship Wordperfect with keyboard templates for the HP150 and Portable Plus.

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(letters continued from page 6)

have filled all our back orders. We appreciate your patience and understanding.—Hal]

Using Reflection's Shell Command And E-Mail

I have finally discovered the difference between Reflection and PC2622, and for me it's a big one!

Reflection has an additional command, **shell**, which is extremely useful when using MemoMaker (or any other Portable resident program) in conjunction with E-mail. The **shell** command allows one to suspend connection to the E-mail system, go directly into MemoMaker, and then return to E-mail directly from MemoMaker. For example, typing **shell memomakr A:\test** on Reflection's command line will put the connection to E-mail on hold, turn on MemoMaker, get the file **test**, allow **test** to be edited, then exit directly from MemoMaker back into Reflection and continue the E-mail session right where you left off!

I do a great deal of work with an E-mail system and get frustrated trying to remember different word processors/editors. The **shell** command makes it extremely convenient to standardize on only one, i.e., MemoMaker. Several other Reflection/PC2622 capabilities help. Keyboard edit keys can be used to edit anything in screen memory. The "device control" and "to devices" function keys provide the ability to copy anything in screen memory directly into Portable files. And the **transmit** command enables any ASCII file (from MemoMaker, Lotus 1-2-3, etc.) to be up-loaded to the E-mail system just as though you were typing it manually (e.g., on the command line, just type **transmit A:\test**).

To be fair, there is a pseudo-SHELL capability in PC2622. **[ctrl] [shift] [x]** will suspend Reflection and its connection to the E-mail system, but it takes you back into PAM where you must call up MemoMaker, then re-start Reflection after finishing your editing. But all this is rather time-consuming and far less convenient than Reflection's **shell** command. It seems to require an extra 100K or so of main memory, apparently to store the state of affairs when suspending connection to the E-mail system.

Keep up the outstanding work with *The Portable Paper* and "Products That Make HP Portables Smarter"! You're doing a great job!

Eric R. Isacson, Saratoga, CA

English Portable Plus Keyboard Differences

I was recently introduced to *The Portable Paper* (by David Burch of Softword, here in England) and have read through the back copies of your excellent magazine. There are a number of issues and questions I would like to raise.

My Plus has an English keyboard and in common with all non-US boards there are problems in using many of the excellent utilities you advertise. This can best be illustrated using Shelp, where interestingly the problems and solutions vary with each mode.

Calculator mode—The math operators and equality sign are in different positions from the US version. In order to use the calculator I would have to use the US key positions for the signs but as they are marked differently this means remembering the positions or marking my keyboard in order to use this mode. If Shelp had made use of the numeric keypad it would be universally useful without problems.

Notepad—Basic alpha characters are the same as on the US version but many signs are in different positions. The solution is the same as (above).

Keyboard Macros—Can be easily used with the keystrokes on my board. The

macro shows up as the equivalent US key sequence so it looks wrong but functions normally. (e.g., **diskpack -d3 -s -w a:** shows up as **diskpack /d3 /s /w a>**)

OFF—No problem apart from the bugs noted for all users.

It would appear that Typing Whiz is another program which is only effective on the US board. I would like to make a plea to programmers on behalf of all non-US version portable users: Please consider us when designing your utilities! Would it also be possible for one of the Personalized Software team to compile a list of products which are keyboard-dependent? The portable reference manual should provide most of the answers.

I feel that in general your reviews on utilities are far too eulogistic and nationalistic and although the US membership must far exceed the sum of all other national members, please try to think of some of our problems. It is probably too much to ask authors of utilities to cater to the world market but this is precisely what you could do.

Finally, are there likely to be any keyboard problems with Lotus 1-2-3 and MS Word?

Colin J. Crowther, London, England

[I agree with what you say. However, we just do not have the resources or knowledge to properly support our non-US customers. The best we can do is publish letters that report the problems and solutions. Fortunately, HP has the resources to support its worldwide customer base, and as far as I know, their versions of MSWord and Lotus 1-2-3 on ROM work fine on all keyboards.

Speaking of solutions, I just had a call from Connie Doolittle in Switzerland who says she finds an extra utility (which Paul Grimmer includes on his HPrint program disk) most helpful in setting proper European page length on the ThinkJet.—Hal]

More Games On The 110/Plus?

Have you ever played any of the Infocom interactive fiction computer games? I have two of them, ZORK I, and ENCHANTER. These games are quite challenging. It took me about a year to figure out most of Zork. I have never reached the end of Enchanter. Almost everyone to whom we have shown these games soon becomes enthralled—trapped into hours of playing.

Infocom sells their games rather inexpensively and generally has specials like ZORK II and ZORK III for $29.95. WISHBRINGER, DEADLINE, WITNESS, STARCROSS, SUSPENDED, INFIDEL, and SEASTALKER sell for $14.95 each.

These games are available for many MS-DOS computers as well as for 100% IBM compatibles. Infocom says that you must order the HP110 versions through Hewlett Packard (implying that HP modifies them to work on their computers). However, HP does not offer a very big selection, and they certainly do not offer them at discount.

Does anyone know if the MS-DOS versions of these games will work on the HP110 and/or Portable Plus? I think it would be worth finding out.

Gary Goodman, Fredericksburg, VA, CompuServe ID # [76012,3675]

Another Approach To HP110 Memory Upgrade?

I have just read with fascination Sam Chau's article about expanding the memory in the HP110 (Vol. 2, No. 6, p. 32). It seems, however, to be an overly complex way to expand the memory.

I have never and will never open up my HP110 to look at the insides (out of curiosity or any other reason), so I don't know what's in there. However, isn't it possible to "stack" similar chips on top of the already-existing chips and increase capacity that way? If theoretically possible, is there enough room in the HP110? If not, when making the suggested conversion, wouldn't it be advisable to use sockets for the new chips if there is room?

In a similar vein I was glad to see the article (Vol. 2, No. 6, p. 7) on the Corvallis Microtechnology external electronic HP-IL drive for the Portables. This seems to me to be the direction to go for the expansion of the HP110, and any other computer for that matter. If developed properly, it may be the way to eliminate mechanical disk drives entirely. Perhaps with the right inspiration from you, it could be developed further for the HP Portables.

Alexander J. Banach, Jr., D.D.S., Naples, FL

File Transfer From HP75 To VAX Using The Portable

I recently used my Portable to copy files from my HP75 to the "Vax." First, using **hplink**, the file to be copied was loaded into the HP75, and I wrote a 3-line program called "Send" to send the file name and print list to the Portable, according to the Link manual. (Screen 82). With **hplink** in A Drive, I connected the Portable to the HP75 in a simple loop. On the Portable I entered DOS and typed **hplink /fFile110.EXT [return]** and on the HP75 ran "Send." On pressing **[return]**, "File75 is copied to File110" appears on the Portable faster than the eye can follow. Exit **hplink** with function key **f8**.

Next, I set the terminal configuration in accordance with the recommendations mentioned in *The Portable Paper* (Vol. 1 No. 4) adding the logon string and the phone number only, and leaving all other items at their default values. In the upload configuration I turned protocols off, from local file to **File110.Ext** and the **[Remote Invocation] [Command Options] [To Remote File]** string to read **create filevax.ext**. "Create" is the DCL command to open a file and put the Vax in text entry mode, and is terminated by **^Z** ("DCL" is Digital's equivalent of DOS). I also set up your **ter.bat** file, but it got hung up in the autologon string—the third prompt is a beep, and I don't think I programmed this correctly! The logon string is also several lines long. With manual logon, I descended to the right subdirectory on the Vax, pressed **User** and **To Host**, and "File75" was uploaded to the Vax in a minute or two.

The Vax inserts an extra linefeed at the end of each line, which can be deleted with the **Substitute** command (just like Turbo's **Find and Replace**). I tried altering the terminal configuration, but it seems that in order to log on Vax only accepts 7-bit text and a **[return] EOL** sequence.

Downloading worked similarly with data capture using the invocation string **type [Filename]**.

William F. Allen, Vancouver, B.C., Canada

About The Editor

You do nice work.

I use the IBM version of Personalized Software's The Editor as much as any other program in my toolbox. I must like it—I gave it mention in my newspaper column. Recently I did a job for the World Bank. The system I built for them needed a good word-processor/editor, so I gave them my copy of The Editor. I plan to include that program in several more systems that I am developing.

Walt Clark, Woodbridge, VA

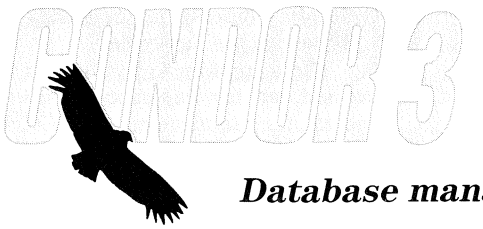
Time Saved For Professionals

The information provided in *The Portable Paper* is very helpful. I have also found that your software programs, for the HP Portables, are a great help to business professionals who may not have time to "play around" to get a program to work on their particular machine.

Gerald R. Williamson, Yanbu Al-Sinaiyah, Saudi Arabia

Configuring The 110 For The 9121 Disk Drive

After reading the article on the use of HP-IB devices with Portables (Vol. 3, No. 1), it occurs to me that it may be helpful to share my experience with this. I've got a 110, but none of the peripherals that are



and

CONDOR, JR.

Database management made easy!

If you have customer files, sales records, inventory, or lots of *anything* that you need to keep track of, you need a database management system (DBMS).

If you want a sophisticated DBMS that even a beginner can use, try Condor 3 or Condor, Jr.

Condor 3 runs on the Portable Plus, Portable Vectra, and HP150. Its smaller cousin, Condor, Jr., runs on the HP110 and Portable Vectra only. Both versions let you **set up a database in a single step**, simply by typing a picture of the input form right on your screen. You enter and modify data—or even revise the database structure—simply by typing right on the same form.

Unlike other database systems, you simply tell Condor **what** to do, not how to do it—and you tell it using simple, English-like statements such as LIST CUSTOMER BY NUMBER NAME STATE AND COMPUTE TOT SALES.TO.DATE.

As a result, it takes only one fifth the time to compute, display, sort, search, or report on your data using Condor as compared with other database systems such as dBASE III. Most users find they can create and begin to use their first database within minutes after opening the package.

Condor 3 (but not Condor, Jr.) is a fully **relational** DBMS. That means you can use Condor 3 to compare, select, and combine data from two or more files. Condor 3 also lets you create your own custom report formats. (Condor, Jr. includes a LIST command for limited report writing.)

You can transfer data back and forth from Condor 3 to Lotus 1-2-3 print files and other files not created by Condor.

Over 150,000 Condor programs are currently in use. We think the Condor people have done a fabulous job of packing an enormous amount of database power into an incredibly easy-to-use system. We urge you to try Condor 3 or Condor, Jr. at our risk today.

Condor 3 . . . . . $495.00
$379.00 for Portable Paper subscribers
Condor, Jr. $99.00
$89.95 for Portable Paper subscribers.

WHAT THE EXPERTS SAY:

"If you want a database you can use immediately (without even opening the manual). . .Condor 3 is the DBMS to buy."
—Jim Morgan, Data Base Advisor

". . .a textbook example of what a database management system should be."
—James Perotti, PC Magazine

". . .for a straight database, I'll take Condor."
—Jerry Pournelle, InfoWorld

RECOMMENDED FOR:	Condor 3	Condor, Jr.
HP110 Portable		●
Portable Plus	●	
Portable Vectra	●	●
HP150	●	
IBM PC and compat.	●	●

MEMORY REQUIREMENTS

Condor 3 requires only 128K of memory to run. The entire program, including the report writer, fits in less than 360K. Since each command is in its own file, you can save memory space by deleting any commands you don't need.

Condor, Jr. is even more memory-efficient: the main program is only 25K, and you add individual 10K programs for each function you wish to use.

intended for use with this machine. I do however have some HP-IB odds and ends, among them an HP-IB 2225 printer (ThinkJet) and several 9121 3 1/2" disk drives (single-sided). I went out and bought the 82169A HP-IL/HP-IB converter and looked forward to sending data all over the place following the direction of the manual. It didn't quite work that way at first.

The printer worked right away with Printer Interface (in **f6 System Config**.) set to "HP-IB:01," the converter at address 00, and the printer at address 01. However, I couldn't do anything with the disk drive. I called the HP Help line and risked the possibility of getting billed for consulting service. It actually took the technicians at HP a couple of efforts, but they came up with the answer, and did not charge me for their time because (they decided) the proper configuration was inadvertently not documented in the manual.

There is a hidden file on B: that is entitled **amigo.sys**. I was told to create a file in MemoMaker that contains this line: **device = b:amigo.sys/O#n** (where "n" is the number of disks to address) and file it on A as **config.sys**. The address of the 9121 is set to 00 and the number of external drives shown in the **f6 System Config** menu stays at "none." In my case where n = 2 for a single 9121 unit, PAM shows A, B, C, and D as available drives where C and D are drives 0 and 1, respectively, on the 9121. It works perfectly. I haven't tried but I see no reason why I couldn't hook up additional 9121's and also (unless there is some problem with disk formatting of which I am unaware) why an HP-IB hard disk would not work the same way. Maybe someone who knows more about this equipment could explain what the limitations are.

Thanks for your continuing efforts on behalf of us 110 users. It makes a difference.

Niles Hanson, San Jose, CA

Configuring The Portable Plus For The 9121 Disk Drive

I recently purchased an HP Portable Plus computer. I attempted to use it with my disk drives (82901M 5 1/4" and the 9121D 3 1/2") as I have done with my HP 110. Using MemoMaker,I have installed **device = b:amigo.sys/0#2** on my 110. This gives me access to my other equipment for storing information. This does not work with my Portable Plus, but it will work with my hard disk 9153 without **amigo.sys** installed.

Robert E. Shea, Arlington, VA

Attaching MS Word Style Sheet

This is something I forgot to mention in my last letter. It refers to David Michael Vetter's problems with MS Word and the HP ThinkJet. I work with MS Word (ROM) myself, and I like this product very much. The ROM version of MS Word (1.1) supports expanded, compressed-expanded and compressed fonts (and of course normal Pica). The easiest way to use this support is with a style sheet. From the edit mode in MS Word, press:

f8 or **Esc** to go to the menu, **gallery**, then **insert**. Assign a key code consisting of one or two characters (I suggest using two meaningful characters instead of one, e.g., ex for expanded, ec for expanded-compressed, etc.), next press **tab**: To **usage**, insert usage (press "up" arrow key to see list of usages) DO NOT PRESS [RETURN] YET!

Next, press: **tab**: to **variant**, insert variant (press "up" arrow key for list of variants.) DO NOT PRESS [RETURN] YET!

Again, press: **tab**: to **remarks**, and insert whatever remark you want to make referring to the use of the key-code (e.g., "Expanded," or "Titles," "Subtitles, etc.) This will facilitate amendments and remind you of what you had in mind when you created this style sheet.

Next, press: **return**, **format**, **character**: Choose from the menu whatever options you want (Tab to the options), but before pressing [RETURN], Tab to **font size**. Insert your respective option

(only ONE—Make separate entries into the style sheet for each size).

16 is expanded, 14 is expanded-compressed, 12 is normal Pica, and 8 is compressed.

Also note that some of the features offered in this menu are not supported by MS Word with the ThinkJet (italics, double underline, subscript, superscript, small capitals). Now press **return**: Your first entry into the new style sheet has now been completed. Start again for your next font size by pressing: **insert**: (You are already in the **Gallery** menu) and continue as explained above. Don't forget to save the style sheet, once it is completed.

Then press: **transfer**, and **save**. Name the style sheet as you wish. MS Word will attach **.sty** to the given name. If you name it "NORMAL," it will be loaded automatically each time you start MS Word. Style sheets with other names have to be attached to the document as shown below. Now press **return**. To quit the gallery menu, press: **edit**, which brings you back to the editing screen. To "attach" your style sheet to a document, if you are in editing mode, press **f8** or **esc** to go to the menu. Press: **gallery**, then **transfer**, and **load**. Type the name of the style sheet you want to attach (Press the "up" arrow key to see the list of available style sheet names which are in the current directory). Again, press: **return**, and **edit**, and your style sheet is now attached to your document.

You can now mark the sections (sentences, single characters, paragraphs, divisions, whole documents) you want to print in different fonts by going to the first or last character of the desired section. Then press **Select** and mark the section with either the respective "arrow" key or the **Select Text** menu softkeys. Once you have marked the section, press **ctrl** and the selected key (of the respective key-code) simultaneously. Then press the second key of the key-code.

There are three key-codes: **ex** for expanded, **ec** for Expanded-compressed, and **co** for compressed. Press **ctrl**+ex, **ctrl**+ec, or **ctrl**+cc, respectively, to have the text emphasized with different print styles. You can change the font for each character. You can have bold printing at the same time by using the respective option in the "Choose Typeface" menu (except for the compressed font).

This "style sheet" may look complicated at the beginning, but it is actually very simple. You see no control or printer codes on the screen. Unfortunately you don't see the font size on the screen either, and if you have more than one font size on one line, the screen doesn't show the correct length, so it's definitely not "WYSIWYG."

Rudolf J. Sommer, Nussbaumen, Switzerland

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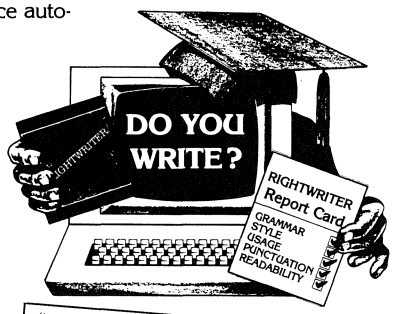

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(110% continued from page 10)

Symphony is an integrated package which includes a spreadsheet, data base, word processor, graphics, and data communication modules. However, Lotus could not deliver it in time or make it small enough to fit onto the HP110 ROM's. Consequently, MemoMaker and Terminal were created in the last few months of development, to accompany 1-2-3 on the HP110.

We have reason to believe that the new version of Symphony 2.0 can be made to run (with custom software drivers) out of RAM on the Plus. By next issue we should be able to give details.

New ThinkJet Cartridge For Plain Paper

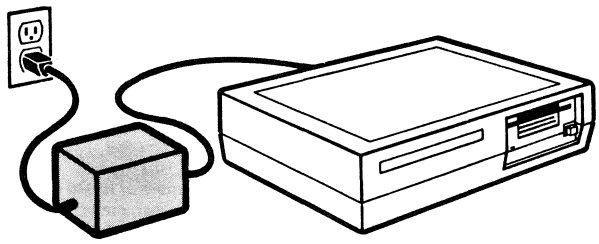
HP reports that ThinkJet, QuietJet, and QuietJet Plus printers can use commonly available printer papers with more satisfying results. According to HP, the original 92261A print cartridge and JetPaper still provide the best possible print quality on these printers, and are recommended for heavy graphics use. However, the new 51604A, black ink, plain paper print cartridge delivers improved text quality on plain papers. The new cartridge boosts less than one second dry time and reduce startup clogging. The new 51604A ThinkJet cartridge retails for $10.95 and can be purchased through HP Direct (800-538-8787), your local HP dealer, or from Personalized Software.

CompuServe Files

In our last issue we began a new column, Paul Grimmer's Portable Tales. In his column, Paul discussed in detail the benefits (for HP Portable users) to be derived from the HP CompuServe forum. The HP forum, like all the forums on CompuServe, contains useful files which users can download into their computers. (To learn how to download CompuServe files, HP110 Terminal users should see the articles in *The Portable Paper* Vol. 1, No. 4, p. 5 and Vol. 2, No. 2, p. 11; Plus TERM and Reflection (PC2622) users should refer to Vol. 2, No. 6, p. 10.)

Available files on the forum range from articles about

THE HP9114 EMPOWERER



If you've been frustrated trying to use your HP9114 external disk drive only to have the battery quit before you've finished your work, then you know the problem. Now you need the solution.

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Plugging in the HP9114 doesn't help, either. That only recharges the battery—it doesn't let you keep working.

WE HAVE THE SOLUTION:
The official HP suggestion is to buy another battery pack and keep both plugged in. When one loses power, replace it with the other. This seems clumsy to us. What if you want to do several hours of disk intensive work? **At Personalized Software we have a better solution—the HP9114 Empowerer.**

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HP150	
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*H*ow many times have you wished you had a second external disk drive? The Portable Equipment Exchange, a division of Personalized Software, is selling HP9114A units including power supply at a substantial discount. See enclosed four-page brochure for details.

using HP Portables to software for the Portables. These forum files are organized into categories or **data libraries**. Currently, there are 14 data libraries, numbered as follows: 0—New uploads; 1—Text/Documentation; 2—Data Communications; 3 -System Utilities; 4—Plotter/Printer Utilities; 5—Word Processing; 6—Data Management; 7—Graphics; 8—Source Code Files; 9—Programming; 10—HP Windows; 11—General Interest; 12—Patches; 13—Application Notes, Questions and Answers; 14 - Communicator articles. My understanding is that libraries 12, 13, and 14 are supplied by the Hewlett Packard Response center and the HP CompuServe forum system operators.

A fairly up-to-date list of all the files in all the data libraries can be found in files **hpfdl.des** and **hpfdl.arc** in data library 0. The **.arc** file is a much smaller "squeezed" version of the file (about 25K) that must be downloaded using XMODEM or the CompuServe protocol. Once downloaded you can use the **arce.com** on the 1988 Subscriber's disk to "unsqueeze" it. Alternatively, you can download the ASCII **.des** file directly (over 50K).

Because of space limitation we cannot list all the CompuServe HP forum files or even the files relevant only to HP Portable users. However, we list below a sample of available files on the forum. The **b** stands for a **binary** file that has to be transferred with XMODEM or CompuServe protocol. Many of the programs listed on the forum have been tested by reader Gary Goodman. We used Gary's research as the basis of our product: the "Best Of DOS Tools."

DL	Filename	Upload Date	File Size	Description
1	**pl23r2.nws**	9-87	2,653	Info on Lotus 1-2-3 2.0 for the PPlus
1	**romdoc.txt**	7-87	21,593	Instructions for programming PPlus EPROM's
1	**portpr.txt**	6-87	16,843	Advantages of program development on HP110
1	**dnlpp.hlp**	4-87	8,127	Download instructions for PPlus
1	**pplus.nws**	11-86	1,030	WordPerfect and dbIII compiler for PPlus
1	**portne.txt**	10-86	11,475	Case histories of using HP110 on the road
1	**swll0.arc**	b 8-86	5,888	List of HP110/PPlus software 8/186
1	**kerpro.arc**	b 8-86	102,272	KERMIT file transfer protocol
1	**appnot.doc**	10-85	17,765	List of application notes available
1	**9ll4ps.doc**	8-85	2,905	Build power supply for 9114 drive
1	**term.hlp**	7-85	5,120	How to communicate between HP150 and HP11
1	**faq004.doc**	7-85	6,670	TERM questions—HP110
1	**faq008.doc**	7-85	12,975	MemoMaker questions—HP150/HP110/PPlus
1	**faq013.doc**	7-85	17,800	Lotus 1-2-3 questions—HP150/HP110/PPlus
1	**hpll0.bug**	12-84	27,435	List of firmware bugs in HP110—12/29/84
1	**dnlll0.hlp**	12-84	13,580	Download help for HP110
2	**mscplu.arc**	b 10-87	3,072	PPlus serial port on/off control
2	**kerm-p.arc**	b 8-86	33,536	KERMIT 2.29 for HP110
3	**pphist.arc**	b 10-87	16,512	DOS command line edit for PPlus
3	**miscpl.arc**	b 10-87	2,432	PPlus serial port control & HPIL test utilities
3	**printc.arc**	b 9-87	23,680	Print Time Manager Calendar on PPlus
3	**hpilst.arc**	b 9-87	25,088	Hints and utilities for IBM/Vectra HP-IL card
3	**pattm.arc**	b 9-87	5,120	HP110 Time Manger block cursor patch
3	**arce.com**	b 9-86	5,504	Extracts files from .ARC archives
3	**arce.doc**	9-86	7,135	Documentation for ARCE.COM
3	**sleep.com**	b 8-86	128	Turn off PPlus and disable ring interrupt
3	**utill.arc**	b 5-86	9,600	Part 1 of Utility Collection
3	**wash.arc**	b 5-86	8,960	File manipulation utility
3	**arc.txt**	4-86	2,045	Introduction to ARC utility
3	**delall.arc**	b 3-86	14,976	Delete files through subdirectories
3	**pdlc.arc**	b 2-86	61,312	Rev C of Portable-Desktop Link for Vectra
3	**sdir.com**	b 2-86	3,328	Sorted directory program for HP150/PPlus
3	**copydi.exe**	b 11-85	12,928	Disk copy utility for HP150/HP110/PPlus
3	**search.com**	b 8-85	3,712	Finds files in different directories
4	**jetctr.arc**	b 9-87	7,552	PPlus pop-up printer control utility
5	**emacpp.arc**	b 5-87	42,880	EMACS for the PPlus
5	**lwc.arc**	b 12-86	10,752	Converts text file to lower case
5	**emacsp.arc**	b 8-86	55,040	EMACS for HP110
6	**ppdrv.doc**	12-86	4,130	Use 1-2-3 v2.01 on PPlus
6	**labels.arc**	b 11-86	28,032	Mailing label program

(chart continues on next page)

DL	Filename	Upload Date	File Size	Description
6	**amorti.arc**	b 9-86	26,368	Generate loan amortization tables
7	**pprle.com**	b 1-87	1,024	View RLE files off line on PPlus
7	**kalII0.com**	b 7-86	15,488	Generate kaleidoscope images on HP110
8	**jetsrc.arc**	b 9-87	12,160	Source for PPlus Printer control TSR
8	**pptsrc.arc**	b 9-86	15,744	Source to PPTERM.COM in DL2
8	**readid.asm**	12-84	1,140	Routine to return serial number of HP110
9	**apburn.com**	b 7-87	1,024	Burn EPROM's on Aprotek programmer
9	**prolog.arc**	b 8-86	63,488	Public domain version of PROLOG-87
9	**xlisp.arc**	b 8-86	172,416	Public domain version of LISP
9	**ppprom.arc**	b 9-85	34,048	ROM programming utilities for PPlus
9	**hpil.hlp**	2-85	2,150	Intro to HP-IL Toolkit for HP110
9	**hpilmn.bin**	b 2-85	2,048	HP-IL monitor for HP110
9	**forth.bin**	b 12-84	17,152	FORTH for HP110
11	**mf.com**	b 12-86	5,888	A game for PPlus (Minefield)
11	**navll3.arc**	b 1-86	96,128	Navigation/flight plan system for HP110
13	**answer.app**	8-87	3,598	Configuring the HP110 for auto answer mode
13	**autolg.app**	8-87	5,602	Configuring the HP110 for autologon mode
13	**cenll0.app**	8-87	1,728	Interfacing a centronics printer w/ the HP110
13	**cts-cp.app**	8-87	15,594	Using Portables, CTS companion Pac
14	**com23.aI0**	11-87	2,495	Introducing the Portable Vectra CS
14	**com23.e5**	11-87	4,258	Creating address labels: ECM & Thinkjet
14	**comI7.e3**	7-87	6,331	Portable Plus—Most frequent questions
14	**comI8.e27**	7-87	7,317	MS Word—Data transfer information

Guidelines For Connecting A Centronics Printer To The Portable

The following application note comes courtesy of the HP Response Center and HP CompuServe Forum: Concerning file **cenII0.app** in data library 13 (see above): This method of connecting The Portable with a standard parallel printer was only tested with the HP110. Plus users: Please tell us of your success in using this method with the Portable Plus so we can report to other readers.

WARNING: The Portable is not designed to communicate with centronics printers. The method mentioned below will not work with all centronics printers. It is merely a configuration that has worked for some printers. If you can still not get your printer to work with The Portable after following these instructions, contact your printer dealer for further assistance.

1. Connect The Portable to the centronics printer through the HPIL/ GPIO interface (HP82165A) ($295 retail, $259 from us). Make sure you have a complete HPIL loop between The Portable and the interface.

2. To configure The Portable, set the PRINTER INTERFACE field of The Portable's SYSTEM CONFIG menu to "HPIB:08." If you are lucky, your printer might work at this point. If your printer still does not seem to be communicating with The Portable, it means the "handshaking" between the converter and your printer is incorrect. To try to get rid of the handshaking problem:

3. Note the configuration made to the copy of the "Interface to Parallel Printer" wiring diagram from your interface manual's Appendix C.

4. Rewire the cable used to connect the interface to the printer so that pin 11 of the printer is connected to pins 1 and 2 of the interface.

5. Next, rewire the cable so that ONLY pin 21 of the interface is connected to pins 19 through 30 of the printer. If your printer still doesn't work after this rewiring, contact your printer dealer for additional help.

Print To The Screen and the Printer Simultaneously

Here is a little trick that will work on all three Portables and on any IBM PC compatible computer. If you are in DOS, and you want to see a directory listing on both the screen and the printer, simply hold down the **CTRL** key and press **p** and type **dir**. Until you press **CTRL p** again, all output from any DOS command appears on both the screen and your printer.

HPORT Update

by David Speltz [76054,1022]

Users of HPORT, the HP Portable section of the Cleveland HAMNET, are reporting that most of the difficulties encountered earlier in the month have been eliminated. Adding the second node to the system resulted in hangs and unanswered calls for about two weeks. This month, members have been discussing the development of their own EPROM's, and quite a few new files for the Portable Plus and the HP110 have been uploaded. Not bad for the first month of operation!

Remember, the data numbers are:
300/1200 baud 216-942-6383
1200/2400 baud 216-942-7516

One bug that has not been corrected (and may take some time), is that the screen will freeze a few seconds when a new user logs on the other node. This is due to the user file being dedicated to the new user only while he registers. We are working on it.

HP110/HP110+ USER GROUPS

Thanks to so many of you who are willing to help organize local users groups. Users groups give an opportunity to share tips, answer questions, discuss other products, trade free software and Lotus templates, and meet other professionals. As you will notice some areas have more than one contact person and some major areas have none. If you are in a "missing" area and would like to organize a group, contact us. If your groups combine also tell us. We will publish this column each issue, keeping it up to date. Write *Local Users Groups, Box 869, Fairfield, IA, 515-472-6330.* **California**, *Southern California* We meet 2nd Thur 7-9 at HP sales office, 5161 Lankershim Blvd, North Hollywood. Request PORTOVEC Notes Newsletter, Dave Mark, 818-794-4969. *San Diego*, Stephen L. Eyre. 619-452-8530, Dan Butterfield, 619-470-3551. *San Mateo, Santa Clara Counties, San Francisco Bay Area*, BAYCHHU, HP Laptops & Handhelds, meet 2nd Sat of the month, Contact Jim Horn, 707-523-4890 eve., or Michael Felsenstein, 415-564-8279, eve. Herbert L. Hamerslough. D: 415-340-8811, E: 415-323-9618. *Los Altos/Mountain View*, Marge Sutton, D: 415-949-0509. E: 415-948-0627. **Colorado**, *Colorado Springs*, Dan Ritt, 303-528-8080. *Denver,* Call Bob Pressey, 303-777-0326 **Georgia**, *Atlanta,* Call Brian Walsh D:404-394-2500 E: 404-399-6842 **Hawaii**, *Honolulu,* Rodney Y. Fukuya if interested, 808-945-3111. **Indiana**, *Indianapolis,* Bob Glass, 317-638-2326. **Iowa**, *Mid Iowa*, Ed Keefe D: 515-964-6644 E: 515-964-7064. *Southeast Iowa*, Hal Goldstein, 515-472-6330 **Minnesota** *Minneapolis/St. Paul,* John Ferman (612) 822-1372 **Maine**, *Yarmouth,* Every last Tue 6:30, US Route one, Yarmouth, ME 04096, 846-5497 **North Carolina**, *Charlotte and surrounding area*, John Jacob, 704-334-3468. **Texas**, *Houston*, Thomas R. Page, D: 713-759-4259, E: 713-528-7138. **Utah**, *Utah County*, Donna Hoover, D: 378-4421, E: 375-4812. **Washington**, *Eastern Washington, Northern Idaho, Western Montana, and possibly Western Washington* , Bob Sandberg. 509-466-4999. *Eastern Washington*, Stephen S. Warner. D: 509-534-1588, E: 509-535-3322. *Western Washington*, Portable, Plus, 150, Vectra users meet first Thursday 7-9 p., HP sales office, Bellevue. Pete Ross, 206-342-8875. Portable, 40 & 50 series: 7-9 p. second Wed., UWash. computer center, Seattle. Bob Moore, 206-543-7879. **Washington D.C.**, *Greater Washington D.C. Area,* 8:00 PM, Third Monday of Each Month, Ballston Tower #1, 800 N. Quincy St., Room 519. Call to confirm and to say, Hi. William F. Cross. D:202-696-4112, E:703-845-9508. **Australia**, 8 Avoca St, S. Yarra, Victoria, Australia. Nigel S. Ball. 03-267-8344. **Central America**, I would be happy to form a users group, either Spanish or English, Apartado Postal 1587, Tegucigalpa, Honduras. **England**, Trafalgar House, Grenville Place, Mill Hill, London, NW7 3SA England. Tim Cullis. (01) 959 4359. **Netherlands,** Mr. R.M. Franquiner, Menthenbergseweg 13, NL-6816 PR, Arnhem, The Netherlands **Spain**, Club de usarios HP 110, Pont Reyes S.A., A la atencion de D. Enrique Serra, Ronda Universidad, 15, 08007, Espana. **Sweden**, Stockholm, first Thursday each month 6:30 p.m., call to confirm. Jens Pettersson 08-713-1710. Telex 149 70 gentel S.

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		3 Year Subscription	139.00[1]	N/A		
		2 Year Subscription	99.00[2]	N/A		
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	Back Issues (indicate numbers)		9.20	N/A		
	Time Manager, Pack, HP Calculator[2]		N/A	7.50[4]		
	1987 Subscriber Disk[3]		N/A	7.50[4]		
	1988 Subscriber Disk[3]		N/A	7.50[4]		
DISKS	10 unlabeled Sony disks and case (HP110 and Portable Plus) (p. 45)		64.90	29.95		
	10 unlabeled Sony disks and case (1.44 meg high density, P. Vectra) (p. 45)		99.95	69.95		
PRODUCTS (ALPHABETICAL)	Condor 3 (Plus, HP150 only) (p. 41)		495.00	379.00		
	Condor Junior (HP110 Portable only) (p. 41)		99.95	89.95		
★	Direc-Link Complete Pack (p. 20)		134.90	115.00		
★	dBXL (p. 12)		199.00	189.00		
	DOS Tools—Portable Utilities Vol. 1 (p. 30)		49.95	39.95		
	The Editor (p. 29)		99.95	79.95		
	The Editor/The Formatter (p. 29)		159.90	99.95		
	Flowcharting II+ (Specify Portable Plus or Portable Vectra)		232.00	209.00		
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	HPDuette (Portable Plus only) (p. 35)		99.95	89.95		
	HP9114 Empowerer (Power Supply) (p. 43)		99.95	89.95		
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	Link HP-IL Connecting Software		80.00	75.95		
	Logitech Mouse System for Portable Plus (mouse, software, cable)		219.00	179.95		
	101 Macros For Lotus 1-2-3		69.95	62.95		
	Milestone		99.95	89.95		
	Mobile Recharger (p. 16)		29.95	29.95		
	Norton Utilities Version 4.0 (p. 15)		99.95	89.95		
	Norton Utilities Advanced Edition (p. 15)		150.00	129.00		
	Power Cube/Recharger (p. 12)		89.95	84.95		
	PrinterTalk/Format110		89.90	59.95		
	Project 8, 9, 10		99.95	89.95		
	1 Meg RAM/8 Socket ROM Card—1 yr guarantee (Plus only) (center spread)		2,350.00	1,995.00		
	2 Meg RAM Card—1 yr guarantee (Plus only) (center spread)		3,495.00	2,995.00		
	RightWriter (p. 42)		95.00	89.00		
	Shelp (works on Portable Plus only) (p. 11)		55.00	49.95		
	SideWinder + Utilities (p. 37)		79.95	69.95		
	Sketch (p. 11)		80.00	75.95		
	Statistix		169.00	159.00		
	T/Master (Specify Plus, HP150, or Portable Vectra) (p. 19)		295.00	279.95		
	Turbo Pascal (Specify which computer) (p. 13)		99.95	89.95		
	Turbo Pascal Starter Kit (Pascal/Tutor/Pascal Programs) (110 or Plus only) (p. 13)		189.85	159.95		
	Typing Whiz		49.95	39.95		
	Webster's Spelling Checker (back cover)		79.95	69.95		
	WordPerfect (Specify Plus or HP150) (p. 39)		495.00	299.00		
	The Word Plus (Recommended for HP110)		150.00	99.00		
	WorldPort 2400 Portable Modem (p. 23)		389./359.00[5]	339./319.00[5]		
MISC.						

ROM BACKUP p.2	ROM Backup—Product Description (For ordering instructions see page 43.)	Price	Qty	Total

Important—Please read and initial:
I already own (or am ordering) the disk-based versions of the programs included in my ROM Backup order. If not purchased from Personalized Software, I have enclosed proof of purchase.

Initials: _____

Subtotal	
Iowa residents add 4% tax	
Shipping and handling (see box at right)	
TOTAL	

★=NEW

European Customers:

Instead of ordering through us, you may contact our European distributor:

SoftWord
Astage, Rectory Lane
Windlesham
Surrey, GU20 6BW
England

Phone:
In England: Bagshot (0276) 75440
In Europe: +44276 75440

Call first to verify pricing.

60-DAY MONEY-BACK GUARANTEE

If, within 60 days, you are dissatisfied with a subscription or product for any reason, you may return it for a full refund. Should you become dissatisfied with a subscription after the 60-day period, we will refund the unused portion of your subscription.

[1] Includes *free* 1987 and 1988 Subscriber Disks.

[2] Includes *free* 1987 Subscriber Disk.

[3] Available only to subscribers.

[4] The $7.50 includes shipping. Alternatively, subscribers may mail in a formatted disk and a 39¢ self-addressed stamped envelope to receive the software at no charge.

[5] Lower price is without cable for connecting to HP Portables. Circle price that applies.

FREE SHIPPING FOR U.S. ORDERS OVER $200

Non-U.S. Customers

Please make payment either by MasterCard or VISA, or by an International Money Order or check drawn off a U.S. bank.

SHIPPING AND HANDLING:

Portable Paper subscriptions:
Subscription prices include U.S. postage. Non-U.S. subscribers: please add the following amounts for each subscription year: Mexico and Canada: $3 surface mail, $6 air. Other countries: $6 surface, $18 air.

All other products:
In North America: Add $4 for one item, $7 for more than one item. FREE SHIPPING FOR U.S. ORDERS OVER $200. Outside North America: Add $3 surface mail, $10 airmail. We bill or charge non-U.S. orders for the actual postage if it exceeds these amounts.

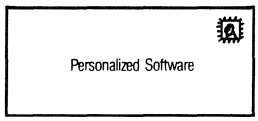
How to Order

TO ORDER BY PHONE:

Call (515)472-6330 between
9:00 am and 4:30 pm Central Time,
Monday through Friday, or use CompuServe
EMAIL—ID 72257, 714.

TO ORDER BY MAIL:

1. Fill out your name, etc. on the reverse side of the order form.
   - Be sure to indicate your disk requirements.
2. Locate desired items on order form.
   - Subscriptions are at the top.
   - Products are next and are alphabetized.
   - The blank lines near the bottom labelled MISC are for you to write in special instructions or to order miscellaneous products not listed on the form.
   - The last section of the order form is for ordering software on ROM backup. See below.



3. Fill in desired quantity of each item.
   - Please pay special attention to footnotes.
4. Calculate shipping and handling costs (see box near bottom of order form).
   - Shipping is FREE for U.S. orders over $200.
5. Calculate total.
6. If paying by check or money order:
   - Make payable in U.S. funds to PERSONALIZED SOFTWARE.
   - Place check and order form in an envelope and mail.
   - If you'd rather have us pay the postage:
     - Fold order form so panel addressed to Personalized Software is on the outside.
     - Tape shut and drop in mail.

ADDITIONAL PRODUCTS

To order any of the following products (or others described in The Portable Paper but not listed on the opposite page), simply write the product name and price on one of the blank lines in the MISC section near the bottom of the order form.

Product	Retail Price	Subscriber Price
Carbon Copy Plus (Portable Plus Version)	$225.00	$199.95
Carbon Copy Plus (Portable Vectra, IBM PC Version)	195.00	179.00
CompuServe Starter Kit	39.95	35.95
Direc-Link (p. 20)	59.95	53.95
Parallel cable	29.95	19.95
Parallel cable adapter	20.00	18.00
Direc-Link Cable Pack (3 serial cables plus parallel cable adapter)	45.00	42.00
HP9114 Empower with Battery Pack (p. 43)	225.00	199.00
HPDuette (Portable Vectra only) (p. 35)	59.95	56.95
Format110	39.95	35.95
The Formatter (p. 29)	59.95	49.95
Mouse: Logitech	119.00	99.95
Mouse: Microsoft	195.00	174.95
Mouse Software	70.00	60.00
Mouse Cable	30.00	20.00
Padded Case for Printer/Disk Drive	39.95	37.95
Padded Case for HP Portable/Plus	59.95	56.95
Pertmaster*	$695.00	$499.00
Pertmaster Demo*	50.00	50.00
PrinterTalk	49.95	44.95
Private File	39.95	34.95
RightWords dictionary extension for RightWriter (p. 42)	29.95	29.95
SideWinder (without utilities) (p. 37)	69.95	59.95
T/Maker (Recommended for HP110) (p. 19)	295.00	199.95
Tiger Fox	32.95	29.95
Turbo Pascal Programs for Portables (p. 13)	49.95	44.95
Turbo Toolbox (p. 13)	69.95	62.95
Turbo Tutor 3.0 (p. 13)	39.95	35.95
Turbo Tutor 4.0 (p. 13)	59.95	53.95
WorldPort 1200 modem (p. 23)	199.00	179.00
Acoustic coupler (300/1200 baud)	59.95	56.95
9-volt AC adapter for modem	6.95	6.95
Cable to connect Portable to Modem	30.00	20.00
WorldPort 1200 to WorldPort 2400 Upgrade Kit (p. 23)	199.00	179.00

*Specify whether HP110, Portable Plus, HP150, or IBM PC. Price of Pertmaster Demo applicable to cost of Pertmaster.

SOFTWARE AVAILABLE ON ROM BACKUP

To order any of the following products on ROM Backup, simply write the product name and price on one of the blank lines in the ROM Backup section at the bottom of the order form.

	Size of ROM	Price
Best of DOS Tools (p. 30)	(Two 64K ROMs) 128K	$129.
The Editor (p. 29)	64K	95.
HPCalculator	64K	95.
HPDuette (p. 35)	64K	95.
HPrint	64K	95.
Shelp (p. 11)	32K	55.
Shelp + SideWinder[a]	64K	95.
SideWinder[a] (p. 37)	32K	55.
Sketch (p. 11)	64K	$95
Super ROM (center spread) (The Editor, Mini PrinterTalk,[b] Format110, Shelp, and SideWinder,[a])	128K	$149.
Turbo Pascal (p. 13)	64K	95.
Typing Whiz	64K	95.
Webster's Spelling Checker (Back cover)	(Two 128K ROMs) 256K	179.

IMPORTANT:

You must own (or order) the disk versions of any products you buy on ROM Backup. See inside front cover for complete information on ROM Backup Service.

[a] This version of SideWinder does not include any of the SideWinder utilities.

[b] Mini PrinterTalk is the abbreviated version included on the PrinterTalk disk. It is functionally equivalent to PrinterTalk for most applications.

Our Products and Services in Brief

Carbon Copy Plus

For Portable Plus and Portable Vectra: a highly rated program that does both data communications and remote control (for operating a remote computer from the keyboard of a host computer). The data communications functions are among the easiest to use on the market. "Dual chat" windows allow local and remote users to type at the same time without garbling messages. The remote control functions are password protected to prevent unauthorized use of remote computers. The entire program is memory-resident. Specify Portable Plus or Portable Vectra version.

CompuServe Starter Kit

Gets you started on the Electronic Information Service, CompuServe (which includes the HP Forum). Includes $25 worth of free time, and CompuServe's monthly magazine, Online Today.

See P. 41 **Condor 3 and Condor, Jr.**

Database programs customized for the HP Portables. Enter data, sort, search, manage files, and print address labels with ease. **Condor, Jr.** runs on the HP110 and Portable Vectra. It allows limited report writing, and is highly memory-efficient. **Condor 3**, runs on the Plus, Portable Vectra, and HP150. It is a fully "relational" system, allowing you to combine data from two or more files. It includes advanced report generating capabilities, data transfer to and from Lotus 1-2-3 and other applications, and much more.

See P. 12 **dBXL**

A dBase III work-alike that runs on the Portable Plus.

See P. 20 **Direc-Link**

A software program for high-speed transfer of files between your Portable Vectra and IBM PC or compatible. Versatile (works with parallel *and* serial ports), easy to use (simple manual file-tagging or automatic unattended file transfer) and very affordable price.

Disk Conversion Service

We will convert your data to and from single-sided, double-sided, high-density, 3½ inch and 5¼ inch formats at a reasonable cost.

See P. 30 **DOS Tools: Portable Utilities Disk, Vol 1**

Well over 50 excellent public domain programs that enhance DOS, all tested on The Portables. Documentation has been rewritten for clarity and ease of use, and includes examples, index, and table of contents.

See P. 29 **The Editor/The Formatter** (separate packages)

The Editor: Many features not in MemoMaker, including search/replace, editing 2 files at once, embedded printer codes, up to 255 columns per line. Also does word wrap, right justify. Easy to use. Uses less than 40K. Versions for HP110, Plus, HP150, Vectra, and IBM PC all on master disk.

The Formatter: Sophisticated text formatter for large reports, program documentation, etc. Multiline headers, footers, page numbers, table of contents, glossary capabilities, and more. Works with almost all printers. (Note: Manual is in draft form: no technical support available.)

See P. 35 **HPDuette**

A software program that lets you transfer files back and forth at high speed between your Portable Plus and an IBM PC or compatible desktop computer—without the need for an HP-IL card. Comes with proper serial cable.

See P. 43 **HP9114 Empowerer**

A hardware product that prevents the HP9114 disk drive from running out of juice in the middle of your work. Plug Empowerer into your HP9114 and a normal wall outlet, and you can run your HP9114 forever.

Flowcharting II+

This program creates professional-looking flowcharts and organizational charts using 26 flowchart symbols in 95 sizes. Wide variety of text fonts for creating labels both inside and outside the shapes. Easy to add and delete lines without disturbing the rest of the flowchart. "Shrink Screen" feature lets you view up to 14″ × 11″ chart on 25-line screen. (Runs on Portable Plus only.)

HPrint

Takes text (ASCII) files you've created with MemoMaker, The Editor, or other word processors and prints them on an HP printer. Comes with italic type font for ThinkJet. Also allows bold, underline, compressed, expanded, subscripts, superscripts, headers, footers, page numbering, double space, and much more—all of which you specify from a simple menu or by means of sensible control codes. HPrint also does mail merging, and it lets you create your own graphic characters (integral signs, Greek alpha, etc.).

LINK HP-IL Connector Software

A software program that lets you transfer data from any HP-IL device to any other HP-IL device. Now you can access your main computer (HP Portable, HP150, or IBM PC), its unlimited storage capability, and all its peripherals from your HP41, 71, 75, or series 80 hand-held!

Logitech Mouse for the Portable Plus

A 3-button mouse for the Portable Plus, bundled with our proprietary Portable Mouse Software and special connecting cable. Using the mouse instead of arrow keys to move the screen cursor makes using your Plus easier and more fun. The Logitech mouse was rated Editor's Choice by PC Magazine.

101 Macros for Lotus 1-2-3

Useful in themselves and also as learning tools for novices and experts alike, these macros include: recalculating ranges, double spacing spreadsheet prior to printout, hiding notes next to data cells, addressing form letters, and printing labels automatically. Customized for Lotus 1A and Lotus 2.01.

See P. 16 **Mobile Recharger**

Lets you recharge your HP110, Portable Plus, Portable Vectra, ThinkJet, HP9114, HP hand-held computer, etc. from your car's cigarette lighter.

See P. 17 **Monitors for The Portable Vectra**

Convert your Portable Vectra to a desktop computer—and back to a portable—in seconds. Excellent values in monochrome and high-resolution EGA color monitors from GoldStar.

See P. 15 **The Norton Utilities —Customized For The Portables**

Allow you to recover deleted Portable files and organize your electronic and external disks. Peter Norton has authorized Personalized Software to include an extra 3½″ disk (formerly available only on 5¼″ disk) with each package sold. The disk includes The Norton Utilities, and instructions for running The Norton Utilities on the Portables and the HP150. Both version 4.0 and the Advanced Edition are now available.

1987 Portable Paper Subscriber's Disk

Includes (1) DISKPACK, a disk-packing utility whose commercial equivalent sells for $50. (2) Time Manager's Calendar Utility. (3) HP Calculator program. (4) C Drive Copy Utility. (5)Game and Lotus templates. Clear instructions are included right on the disk.

1988 Portable Paper Subscriber's Disk

Contains: (1) New utilities for Time Manager, including an expanded Calendar program and an automatic mail-merge utility. (2) Some of the best public domain software and "shareware" for the HP Portable Vectra. (3) A password program to protect usage of the HP110 Portable. (4) TERM xmodem program for the Portable Plus. (5) Lotus templates. (6) Games. (7) New DOS tools. (8) A file to toggle HP and Alternate mode from DOS. (9) Lots more. Clear instructions are included right on the disk.

See P. 12 **Power Cube**

Powers and recharges up to four HP devices (HP Portable, ThinkJet, HP9114, HP hand-held, etc.) from a *single* wall outlet.

PrinterTalk and Format110: MemoMaker Enhancers

PrinterTalk lets you change type styles in the middle of a document, change number of copies and lines per page, do automatic page numbering, and much more. **Format110** lets you format headers,

footers and page numbers; chain or merge documents; compensate for "widow" and "orphan" lines and much more.

Private File

Protects your letters, documents, and data files by scrambling your file so only you can understand it.

3 Project Management Packages

All 3 work on the HP110, Plus, Vectra, HP150, and IBM PC. **Project 8-9-10**, a Lotus template, helps you manage small to medium projects. **Milestone** is also for small to medium projects. (On HP110, you need to scroll to see entire Milestone screen.) **Pertmaster** is for medium to large projects (specify which machine).

See center spread **2-Megabyte RAM card**

A giant leap in memory size for the Portable Plus. Simply remove your existing RAM drawer and replace it with this card. Works with any Portable Plus with 512K of built-in memory. We will accept your old RAM drawer and any extra memory as a trade-in towards purchase.

See center spread **RAM/ROM Card**

A megabyte of RAM plus four pairs of ROM slots. Add the RAM/ROM card to your Portable Plus and you have a megabyte of extra RAM in addition to space for Lotus, Reflection, Webster's Spelling Checker, MemoMaker/Time Manager, and SuperROM (5 products on one ROM chip). We will accept your old RAM or ROM drawer and any extra memory as a trade-in towards purchase.

See P. 42 **RightWriter**

Flags errors in grammar, style, usage, and punctuation, inserting comments directly into your document. Also produces overall critique (strength of delivery, use of jargon, grade level). Works with most word processors. Also available: **RightWords** dictionary extension utility: it has 7 auxiliary dictionaries (business, computers, engineering, etc.), and also lets you add words of your own to RightWriter's built-in dictionary.

See P. 2 **Software on ROM**

Many of our best-selling programs are available on ROM chips via our ROM Backup service. (Portable Plus only.) Saves valuable electronic disk space, minimizes need for disk drive. **Custom ROMs** also available.

See P. 11 **Shelp**

From within almost any program, Shelp gives you immediate access to a notepad and calculator and lets you define up to 26 keyboard macros—that is, assign up to 31 characters to a single keystroke. Written exclusively for the Portable Plus.

See P. 37 **SideWinder**

This program allows you to print your spreadsheets (or any other text file) sideways on your ThinkJet. This means you can print your 60 column by 53 row spreadsheet from your Portable as one long printout without cutting and pasting.

See P. 11 **Sketch**

A graphics program for the HP Portables. Lets you draw free-form using cursor keys. Also draw lines, boxes, circles by pressing a single key. Five character sets can be displayed normally, sideways, or even upside-down. Entire screen can be printed on ThinkJet at virtually any enlargement. Screens can be saved for future use. Screens can also be imported into Sketch from Lotus and other programs. Only uses 44K of memory.

Soft Padded Cases

Roomy, rugged, high-quality, highly padded cases to protect your ThinkJet, HP9114, and HP Portable when traveling.

Statistix

A comprehensive statistical package that's easy to learn and use. Runs on the HP110, Portable Plus, HP150, and IBM PC compatibles. Data can be entered from keyboard or imported from spreadsheet or database files. Includes multiple regression, most standard parametric and non-parametric tests, p-values, plots, histograms, and much, much more.

Tiger Fox

A great video game of changing mazes and double pursuit. First video game designed for the Portables.

Time Manager

The highly acclaimed Portable Plus ROM-based **Time Manager** program in a 3½"disk version for the HP110 Portable. Does not run on Portable Plus. (Available to Portable Paper subscribers only.)

See P. 19 **T/Master and T/Maker**

T/Master is a fully integrated word processor, speller, relational database manager, spreadsheet, file manager, and communications package. Also includes graph making. It runs on the Portable Plus and Portable Vectra without modification, and on the HP150 with a PC emulator. **T/Maker** is an earlier version of T/Master; it runs on the HP110 Portable with an external disk drive. T/Maker does not include the communications module. Both programs are more integrated than any other package on the market. Our reviewer says, ". . . there is no other application I know of that matches the power, thoroughness, and simple elegance of T/Master."

See P. 13 **Borland Turbo Pascal —Customized For The Portables**

Turbo Pascal, the HP Portable programming language of choice, outstrips others in price, performance, compatibility, memory consumption, and programmer environment. The WordStar-type editor alone is worth the price. Borland has authorized Personalized Software to include an extra disk customizing the Turbo editor to the HP110 and Portable Plus's editing keys. The **Turbo Pascal Starter Kit** includes **Turbo Pascal, Turbo Pascal Tutor 2.0** , and **Portable Pascal Programs** (a double-sided disk with more than 50 program examples for the Portables). Also available: **Turbo Toolbox** (includes Pascal sort and search routines that create database/file-management system).

Typing Whiz

Better than almost any typing tutor program on the market—designed specifically for The Portables and the HP150. Immediate numeric and graphic feedback of your progress.

Inside front cover **Used HP Portable Equipment**

The Portable Equipment Exchange, a division of Personalized Software, buys and sells used HP110s, Portable Pluses, HP9114s, HP ROMs, and RAM drawers for the Plus. Because of HP quality, used HP products are a great buy. 30-day return policy on all used equipment.

See P. 1 **Volume Discounts**

Corporate buyers, users groups, and HP dealers: Order products and subscriptions from us in quantity and save.

Back cover **Webster's Spelling Checker**

Rated Editor's Choice by PC Magazine, this spelling checker packs a hefty 110,000-word dictionary into just 207K of disk memory. Webster's shows you incorrect spellings in context and suggests corrections, also lets you preview questionable words before you edit. Exceptionally easy to learn and use. Customized for the Portable Plus and HP150.

See P. 39 **WordPerfect 4.2**

Disk based Portable Plus, Portable Vectra, and HP150 version of the best-selling word processor. Includes spelling checker and thesaurus.

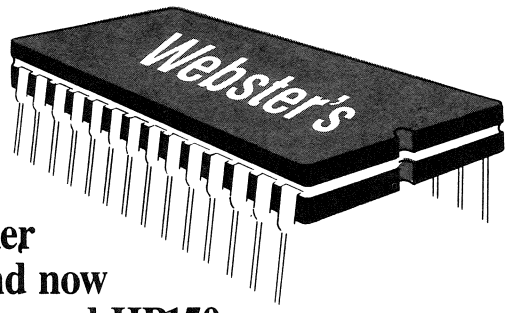
The Word Plus

An excellent spelling checker with a choice of two dictionaries—45,000 words and 35,000 words— plus the ability to input additional words and abbreviations of your own. Also does word counts. Customized to the HP Portables.

See P. 23 **WorldPort Portable Modems**

The **WorldPort 2400** is a battery-powered, highly compact (4" × 2" × 1"), lightweight (6.5 oz.), full-featured external modem that transmits data at 300, 1200, and 2400 baud. Faster than HP's internal modems, the WorldPort 2400 is fully compatible with the industry-standard Hays AT Command Set, and with both the CCITT and Bell communications standards. The **WorldPort 1200** modem transmits at 300 and 1200 baud.

Portable Plus users: At last! A great spelling checker available on ROM!



Webster's (web'stərs) n. The spelling checker rated Editor's Choice by *PC Magazine* (Dec. 24, 1985), and now available from Personalized Software for the Portable Plus and HP150.

—Customized on 3½" disk by special arrangement with Simon & Shuster, Inc.

PC Magazine rated eight leading spelling checkers for ease of use, flexibility, speed, overall program size, thoroughness, and accuracy. WEBSTER'S NEW WORLD SPELLING CHECKER came out on top—for a number of good reasons:

First, there's sheer size. WEBSTER'S contains over *110,000 words* in its dictionary—five times the number in Hayden's Speller, 2½ times as many as in The Word Plus—yet WEBSTER'S dictionary and main program take up only 207K of disk memory.

Second, WEBSTER'S isn't just easy to use—it's positively a *pleasure*. It reads your files at high speed, then displays every questionable word *in context*, highlighted. At the same time, in a "window" off to the side, it gives you a list of possible correct spellings. A simple menu gives you the following options:

- Accept the word as is
- Replace the word with one of the suggested spellings
- Enter the correct spelling manually
- Add the word to an auxiliary dictionary of frequently used words
- Replace all other occurrences of the word
- Look up the spelling of any other word at any time

WEBSTER'S also lets you mark in your text any spelling corrections that change length of a word; this lets you quickly locate portions of text that may need reformatting.

WEBSTER'S will automatically locate double repetitions (like "and and"). It can correct transpositions ("itme" becomes "item"), missing apostrophes ("dont" becomes "don't"), and *typos* of all kinds ("spellling" becomes "spelling," etc.).

If you're not sure of a word, you can even *spell it the way sounds*, and chances are WEBSTER'S will supply the correct spelling. ("Fenomenon" gets corrected to "phenomenon," for example.)

In addition, WEBSTER'S will let you preview a list of all questionable words *before* displaying them in context; this saves you time because it lets you eliminate words from the questionable list (or add them to your auxiliary dictionary) before you begin the editing pass.

John Dvorak, writing in the *San Francisco Examiner*, called WEBSTER'S "the best spell-checker we've seen in a long spell." Henry Kisor of the *Chicago Sun Times* has called WEBSTER'S "the best proofreading software on the market." We agree with them both—and we think you will too. Order your copy at no risk today.

Webster's Spelling Checker on 3½" disk customized for the Portable Plus and HP150 . . . . . $79.95
$69.95 for Portable Paper subscribers.

Webster's is available on ROM backup for an additional $179. See ROM ad in this issue for important details.

RECOMMENDED FOR:			
HP110 Portable		Portable Vectra	•
Portable Plus	•	HP150	•
IBM PC and compatibles			•
Available on ROM Backup for the Portable Plus			

WEBSTER'S SPELLING CHECKER works with any file produced by the Editor, WordStar, and MemoMaker. It also works with ASCII files produced by MS Word and Word Perfect.

Our version of WEBSTER'S includes a customized 3.5" disk and simple instructions for running the program on the Portable Plus and HP150. A special utility allowing WEBSTER'S to run on the HP150 is included on the disk.

60-DAY MONEY BACK GUARANTEE
See order form for details.

TO ORDER

Use postage-paid order form inside back cover or send check or credit card information (#, exp. date, signature) to:
Personalized Software
P.O. Box 869, Fairfield, IA 52556 515/472-6330

The Portable Paper
Personalized Software
P.O. Box 869
Fairfield, Iowa 52556

BULK RATE
U.S. POSTAGE
PAID
FAIRFIELD, IA
PERMIT #218

HP Portable users: Sorry, WEBSTER'S won't run on the 110; your best bet is THE WORD PLUS, another top-rated spelling checker available from Personalized Software.

© Copyright 1987 Personalized Software